CIESTIVE Issue 053 January 2010



Interview Pao (Thitipong Jitmakusol)



The Gallery Alexey Kashpersky, Rafael Grassetti, Iker Cortazar & morel



Project Overview
"Military Robot"
by Łukasz Pajak



FREE – Inside Look!
Digital Art Masters: Volume 4
Project Overview by Andrei
Kashkin



- Free Environment Lighting Scene & Textures

CÉDRIC SÉAUT CIARITE R AND EL SEAUT CARRIER SEAU







MUJERY

NEW!! ZBrush & 3dsmax Character Modeling

The talented **Cédric Séaut** shows us the techniques he uses to create detailed looking models in ZBrush & 3ds Max in our new 5-chapter tutorial series

NEW!! Environment Lighting: Outdoor

Andrew Finch, Andrzej Sykut, Joseph Harford & **Fredi Voss** bring us the first chapters in our brand new outdoor lighting series

V-Ray for 3ds Max

In the second chapter of our **new** tutorial series dedicated to the V-Ray renderer, **Eric Ennis** takes us through **Vray Materials** + **Textures**

Creating a Fantasy Scene

In the third chapter of this tutorial series, **Richard Tilbury** looks at extracting textures from photos which can later be used on our 3D models

3dcreative Contents



EDITORIAL

Welcome to the first issue of 2010, and with the New Year comes two new tutorials to get excited about!

We'll be starting a fantastic new five part tutorial series on character modeling by the second place winner of the Dominance War IV competition,

Cédric Séaut using Max, beginning this month with a look at the concept of the character, focusing on the building of the character from the mesh to the basic sculpting. We also start the New Year as promised with another new tutorial series, environment lighting with Andrew Finch for Max and Mental Ray, Andrzej Sykut for Max and V-Ray, Joseph Harford for Maya and Mental Ray, and Fredi Voss in Cinema 4D. Each of our artists begins with our outdoor scene at night, and talks us through the lighting and applying mist and fog. With two great new tutorials like this the following few months promise to be exciting!

In this issue we also pick up where we left off in our V-Ray for Max series by **Eric Ennis**, this month focusing on materials and textures. He walks us through V-Ray and its many settings, and we also get a peek at some of the special features that it offers. Another tutorial we pick up again in the New Year is creating a Fantasy Scene by **Richard Tilbury**; this month Richard shows us how we can use Photoshop to extract textures from photos to enhance our Fantasy Scene.

This year's first interview is with Digital Domain artist **Thitpong Jitmakusol**, otherwise known as Pao, asking him what it's like in
California working on blockbuster movies, and how his artwork is
influenced by his upbringing in Thailand.

We bring you a making of from Łukasz Pająk, and in our gallery feature artwork from Sven Juhlin, Christopher Desse, Alexey Kashpersky, Caio César Brachuko Fantini, and many more!

What a start to the New Year?! Enjoy!



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CREATING A FANTASY SCENE Chapter 3: Using 3D, Photography & Post-Production



"MILITARY ROBOT"
Project Overview by Łukasz Pajak



"LONELY DRIVER"
Digital Art Masters: Volume 4 – Free Chapter



ABOUT US





NEW! ENVIRONMENT LIGHTING Series for 3ds Max MR & V-Ray, Maya & Cinema 4D

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Sdcreative Contributors

CONTRIBUTING ARTISTS

Every month artists from around the world contribute to 3DCreative, and you can find out a little more about them right here! If you'd like to get involved in 3DCreative magazine, please contact: simon@3dtotal.com

ENVIRONMENT LIGHTING OUTDOOR SCENE

We welcome back our popular Environment
Lighting tutorial series with a new lineup of
talented artists: Andrew Finch (3ds Max +
MR), Andrzej Sykut (3ds Max + Vray), Joseph
Harford (Maya) and Fredi Voss (Cinema 4D).



RICHARD TILBURY

Has had a passion for drawing since being a couple of feet tall. He studied fine art and was eventually led into the realm



of computers several years ago. His brushes have slowly been dissolving in white spirit since the late 90s, and now his graphics tablet has become their successor. He still sketches regularly, balancing his time between 2D and 3D.

www.richardtilburyart.com | rich@3dtotal.com



Andrew Finch

Aged 27 and living in the great city of Birmingham in the U.K., Andrew has a degree in 3D Animation which

inspired his passion for environment art. He now works as an environment artist at Rebellion, and says, "Working in the games industry is exciting: you never know what the next project will be and there's always something new to learn.

This helps to keep you creative and grow as an artist." afinchy@googlemail.com





JOSEPH Harford

An avid artist since childhood; after freelancing in advertising and film Joe worked in the games industry at



Crytek GMBH, the German games company behind Far Cry and Crysis. He later moved to Ubisoft as a senior character artist, and has since founded ShineLabs, a digital asset and artwork company, where he currently works.

www.josephharford.com

Josephharford@googlemail.com



Andrzej Sykut

When it comes to CG, Andrzej is a bit of a generalist, but lighting is where the fun is for him – that, and post-production/

compositing. He currently works at Platige Image, and also does some freelancing as well. While he enjoys his work, it's also time-consuming, so he tries to get away from the computer as often as possible to enjoy the world. http://azazel.carbonmade.com/eltazaar@gmail.com





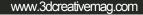
FREDI Voss

Living and working
as a fine artist and
3D freelancer in
Germany, Fredi –
a.k.a. rollmops – can
often be found on the



various web communities, where he has also won several awards. His client list includes Audi and Siemens, and he also has as Animago Award and a Fine Art degree under his belt!

http://fredivoss.cgsociety.org/gallery/ vuuxx@gmx.de





Pao (Thitipong Jitmakusol)

A multi-skilled artist born in Bangkok, Thailand, Pao grew up in a wholesale paper factory, introducing

him to the world of art and creativity. His work
has received recognition internationally, and
he currently works as a digital artist at the
prestigious Digital Domain in Venice, California,
where he has worked on titles such as *Pirates of*the Caribbean, Transformers, and G.I. Joe.
www.iampao.com | iampao@gmail.com





ERIC Ennis

26-year old self-taught digital artist in Paris, France, Eric saw *Tron* as a child and decided then that 3D was the way to go! He began



learning LightWave 4, later moving onto 3ds Max 3. He started out in videogames, working for various companies in Paris, and then moved to England to join Realtime UK, before joining BUF Studio in Paris.

www.eric-ennis.com contact@eric-ennis.com

WOULD YOU LIKE TO CONTRIBUTE TO 3DCREATIVE OR 2DARTIST MAGAZINE?

We are always looking for tutorial artists, gallery submissions, potential interviewees, 'making of' writers, and more. For more information, please send a link to your portfolio, or send examples, to: simon@3dtotal.com



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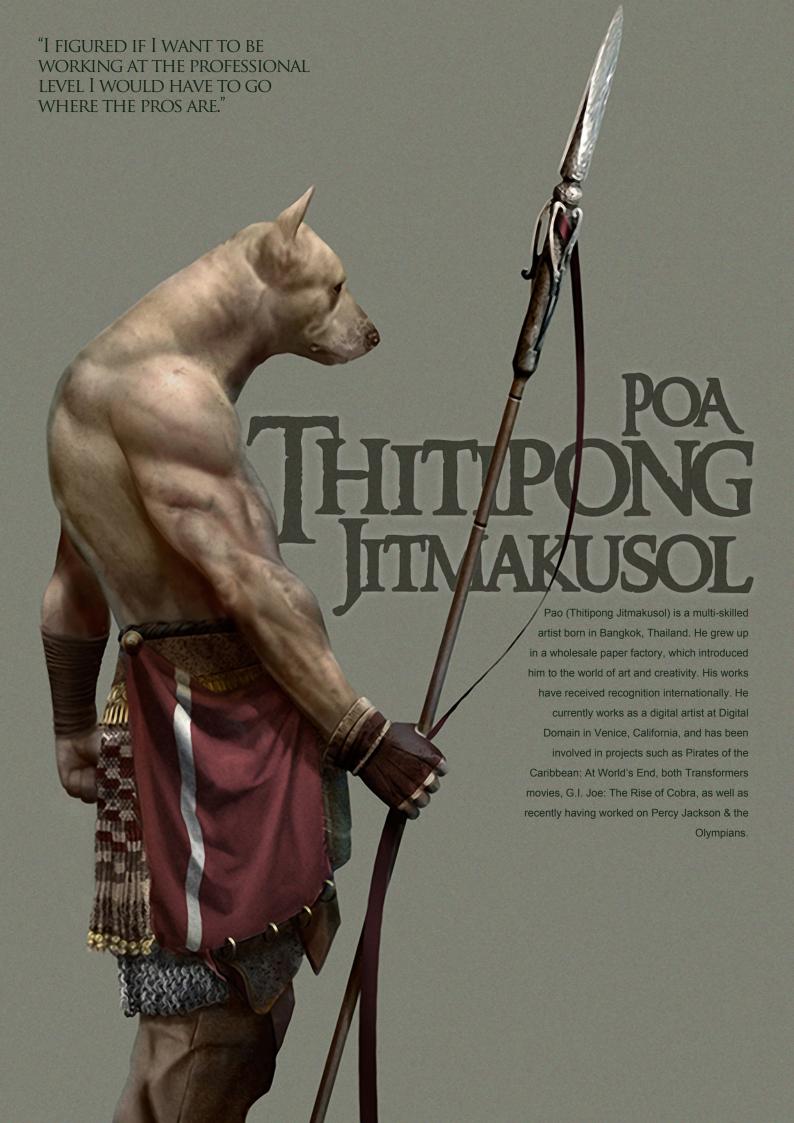








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An Interview with Pao (THITIPONG JITMAKUSOL

I see you are from Bangkok, Thailand but now work at Digital Domain in Venice, California. Can you tell us a bit about this transition?

special effects and CG animations while I was where the pros are. It was quite a mission to persuade my parents, as making money by doing art is nowhere near any concept they have. I lived in New Zealand for roughly three years so the fact that I have to be very far away from home was not that much of an issue.

Do you have an academic training? Or are you are self taught? Or maybe both?



BEING AROUND PEOPLE WHO HAVE THE SAME GOALS AND INTERESTS CAN REALLY BOOST YOUR LEARNING CURVE.

self taught traditional artist then I went to an art

was mainly to concentrate on my computer skills and to meet colleagues and friends. Being around people who have the same goals and interests can really boost your learning curve.



Do you think you could have made it in the industry, without going to art school? Are any of your colleagues 100% self taught or do you think this is impossible these days?

I like to believe that with enough determination you can pretty much reach any goal you want, so I want to say yes, however I imagine it can met a person like that? No.



In your gallery you seem to be a very accomplished 2d and 3d artist, which one came first? And do you have any preferences in the types of work you do?

Chicken or Egg (laugh). As I mentioned, I started doing tradition arts such as drawing, painting and sculpting and then I got really interested in CG and became a 3D person, but my need for flat 2D images is constantly trying to fight its way back. I try not to restrict myself to one media or art form. I want to be flexible and try new things as long as the subject is inspiring and fun.

I want to be flexible and try new things as long as the subject is inspiring and fun.

Do you pursue personal projects outside work? Or do you have any other hobbies that get you away from the computer screen?

Definitely, I am constantly working on my own projects and trying new techniques. I do drawing, painting, sculpting, screen printing and oh, recently I got myself into Kenpo Karate which can really let go of the steam, and it is an art form too.

Lets take one of your recent gallery images and chat about that, can you tell us about the creation process and some of your techniques behind "Old Witch"?

On the subject of new things, The "Old Witch" image is a study for photo manipulating techniques, where I have selected photographs and textures and composite it together on a presketched face, then painting on top. Really, it is something I did for a guick test

If one day you were walking home and suddenly a real witch jumped out and said "I'm going to turn you into a mango unless you can impress me with you artistic talents right here right now" what would you do?

I would tell her that witch-hunt is back in trend as I flick out my lighter (evil, evil laugh).

Over the last 6 years you have built up a lot of experiences, at EA, University Study advisor and now Digital Domain, is there one particular project that sticks in your mind as the best learning experience you have ever had?

Each project has different vibes and momentum Some of the big projects will really test your endurance. The smaller project like the Halo3 commercial was extremely rushed but I got a lot of creativity freedom. What I find fascinating about the industry is that there are so many talented people around.

If your creative director walked in and said I have a dream project for you Pao, it's the project you will enjoy more than anything, what would you like it to be?

Something outside the box, that's new, pretty









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MELANCHOLY ROBOT

Paul Gogola

http://www.digitalimpression.org

info@digitalimpression.org

(Above

JUMBO, THE GIANT BEETLE

Dennis Jensen

http://www.dsigart.dl

3d.deje@gmail.com

(Belov











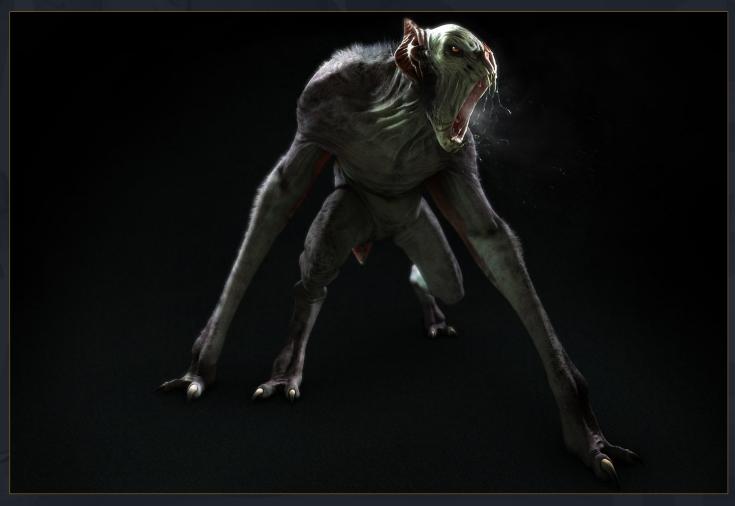


ATLANTIS HERALD

Alexey Kashpersky http://rid.at.ua kashperskya@gmail.com (Above)

VAMPIRE

Caio César Brachuko Fantini http://caiofantini.blogspot.com caio.fantini@globo.com (Below)













This series of five tutorials will focus on the topic of outdoor lighting and more specifically the task of setting up different light rigs to reflect a variety of weather scenarios. Each of the chapters will use the same base scene as a starting point and show a step by step guide to finding a lighting and rendering solution to describe a set time of day under different conditions ranging from a damp foggy night to sunset / sunrise.

The tutorials will explain the type of lights used and how to set up their parameters alongside the combined rendering settings in order to achieve an effective result. The manipulation of textures will also be covered in order to turn a daylight scene into night for example, as well as a look at some useful post production techniques in Photoshop in order to enhance a final still.

FOLLOW

This month our artists will show you how to turn our seemingly boring scene into a truly atmospher environment with the first chapter cover Fog/Mist at Night Time.

So if your interested in seeing the first chapter of this amazing new series, please flip to the back of this magazine and enjoy.

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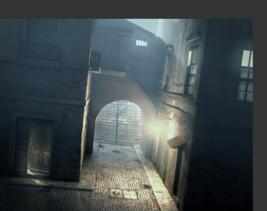
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MAYA + MENTAL RAY

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OUTDOOR LIGHTING

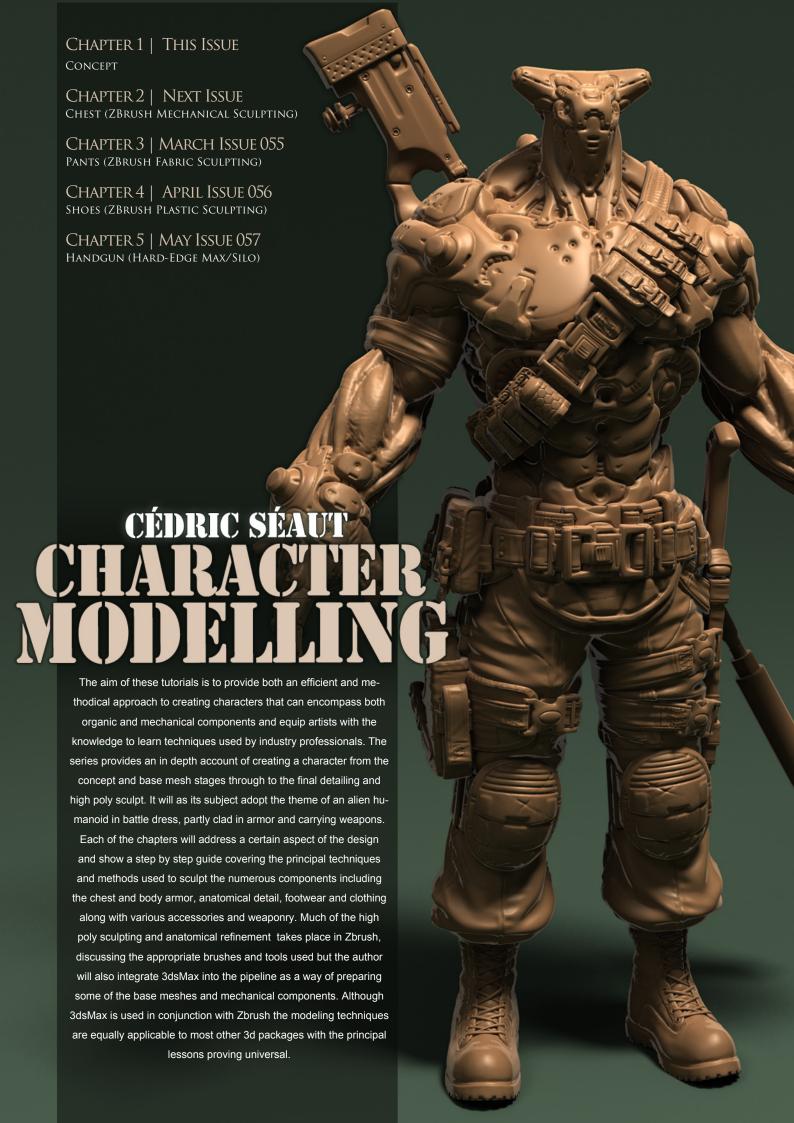






Learn Animation from the Best in the Business





CHAPTER 1 - CONCEPT

Software Used: ZBrush, 3ds Max, Silo, and Photoshop

INTRODUCTION

There are several ways to come up with a concept, the most obvious one being to draw a quick shape in 2D to define the main volumes, but you can also start from a very simple base mesh and play with volumes in ZBrush. The advantage of this technique is that you can make one base mesh that you can then reuse for many other concepts, and the second advantage is that you will have a solid 3D base to then work from to polish the character.

Part 1a – Simple Base Mesh Creation

For this character I'm using an old base mesh that I have changed slightly for this tutorial, but I will show you the way I would usually create one from a simple primitive so you can start from scratch.

- 1. Create a box primitive in 3ds Max with the parameters, as shown in Fig.01.
- 2. We are going to center this box at the center of the 3ds Max scene. To do this, simply right-click on the button in the top-left, as shown in Fig.02; a pop-up will display just enter 0, 0, 0 for the X, Y, and Z values.
- **3**. To be able to modify the object, convert it into Editable Poly, just select the cube, right-click on it, and select Convert to Editable Poly from the list (**Fig.03**).
- **4**. To make the modeling easier, we are going to remove the half right of the object and work on the left side only. In your polygon selection, select the right side and delete it (**Fig.04**).

Fig 01

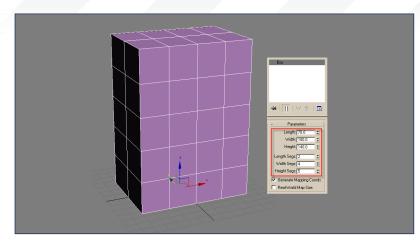


Fig 02

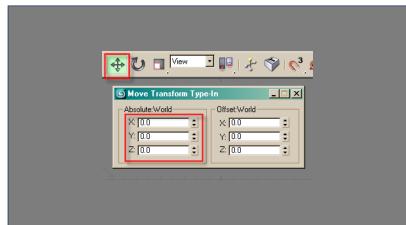


Fig 03

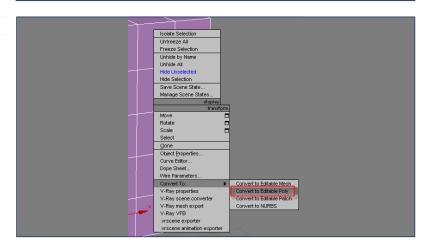
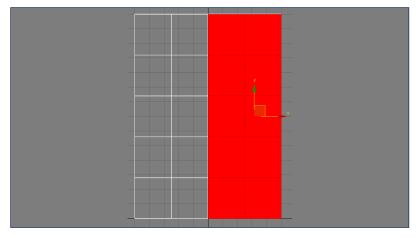


Fig 04

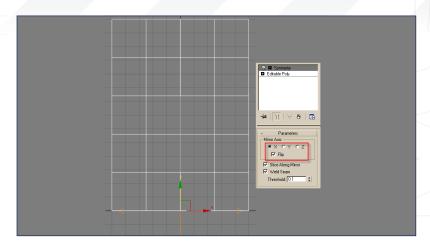


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Chapter 1: Concept CHARACTER MODELING WITH CEDRIC SEAUT

5. It's time now to create an instance of the active part (the left one). Apply a Symmetry Modifier – don't forget to select Flip, otherwise you won't see anything in the scene. Because your object is in the middle of 3ds Max scene, everything will work fine automatically (**Fig.05**).

Fig 05



- **6.** To test if everything is setup well, go back to Editable Poly in the stack don't forget to click on the white T-shaped icon (**Fig.06**), otherwise you won't be able to see the right side and will only be able to play around with the left. In Vertex mode, select some and move them the opposite side (right) will mirror what you're doing exactly on the left, in real time.
- 7. Let's start with the head: We are going to keep it very simple. The goal is to prepare a base mesh as cleanly as possible to be used for sculpting. This means:
 - As many quads as possible (triangles are allowed, but avoid stars as ZBrush doesn't work properly with polygons with more than 4-sides)
 - Keeping polygons as evenly spaced as possible; you'll have better results while sculpting

In **Fig.07** is a preview of the head. As you can see, at the top of the head, some space has been left to extrude a horn from it later on (something I have in mind for the concept).

8. Select the polygon on the top and extrude it by clicking on the Extrude button (Fig.08).

Fig 06

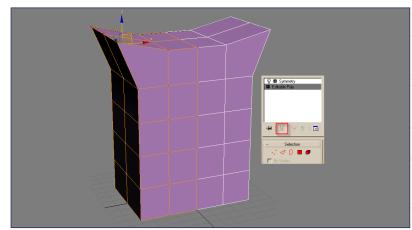


Fig 07

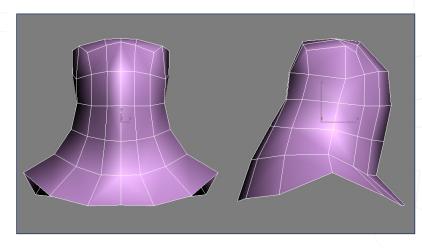
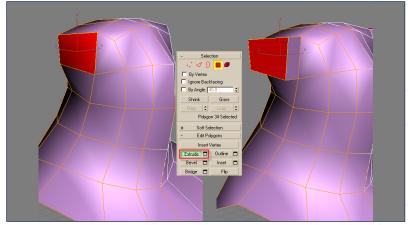


Fig 08



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CHARACTER MODELING WITH CEDRIC SEAUT Chapter 1: Concept

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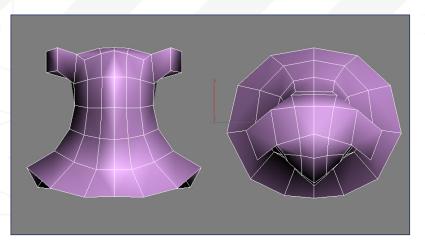


Fig 09

9. Here are some screenshots of the head with the horns (**Fig.09**). The position of the horns doesn't need to be perfect at this stage; keep in mind you can do absolutely everything you want inside ZBrush – they just need to be there, we can maneuver them later on.

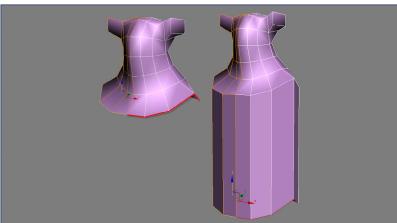


Fig 10

10. Now we're going to move onto the torso. Simply select all the edges at the bottom, in Edge mode, and by pressing Shift move them downwards (Fig.10).

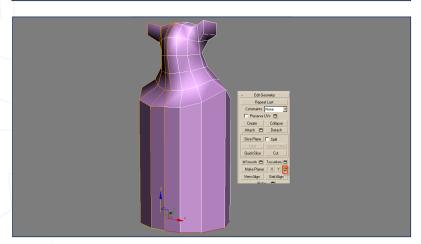


Fig 11

11. It is still best to keep things straight at the moment, so flatten them by pressing the Z button, as shown in **Fig.11**, to align them along the Z-axis.

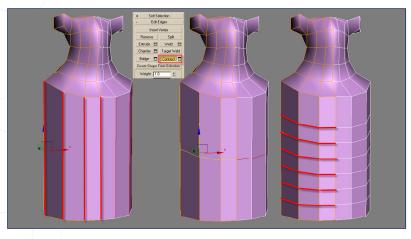


Fig 12

12. To be able to come up with a good shape, we are now going to add some edge loops. Select all the edges, as shown in Fig.12, and click on the Connect button. This will create a new edge loop in the middle of the previous selection. Redo the operation several times to get more edge loops.

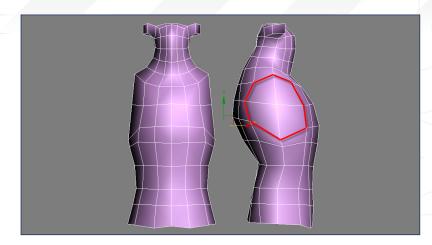
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Chapter 1: Concept CHARACTER MODELING WITH CEDRIC SEAUT

13. Move some vertices now to get a more human-like shape, but once again, don't worry if it doesn't look perfect because this is something we can change very easily and quickly later on in ZBrush. Don't forget to leave some space on the side to prepare the shoulder and the arm!

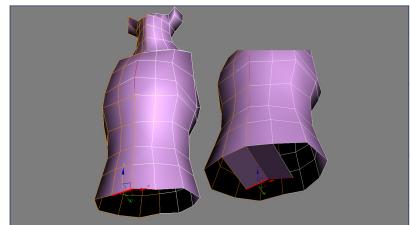
(Fig.13)

Fig 13



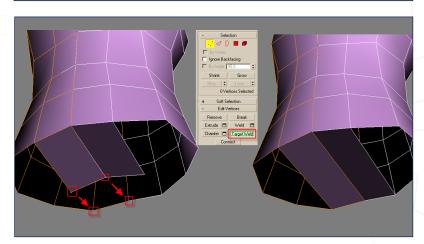
14. We are going now to close a part of the object at the bottom, which will be the crotch area, in-between the legs. Select the edge, as shown in **Fig.14**, and extrude it by pressing Shift.

Fig 14



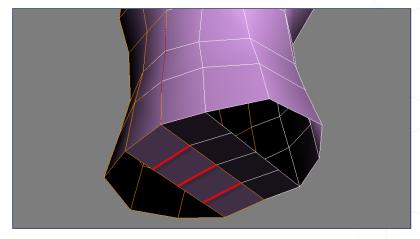
15. Click on Target Weld, and one-by-one select first the origin vertex, and then the target (**Fig.15**).

Fig 15



16. In the same way as explained before (see step 13), cut the new face with 3 edges (**Fig.16**).

Fig 16



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CHARACTER MODELING WITH CEDRIC SEAUT Chapter 1: Concept

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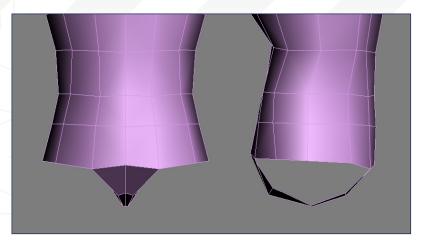


Fig 17

17. Move some vertices to achieve something that looks like what is shown in **Fig.17**.

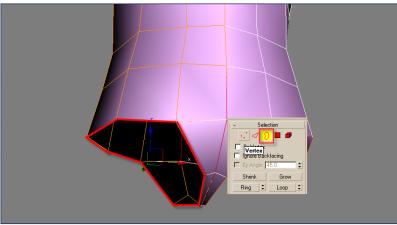


Fig 18

18. Select the area which will be the beginning of the thigh, in border mode (**Fig.18**).

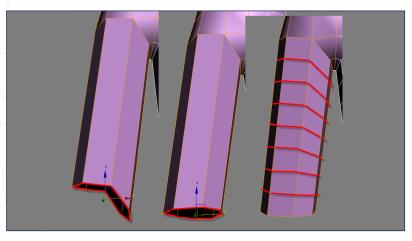


Fig 19

19. As you previously did for the torso (see step 12), extrude the leg and create some edge loops on the new extension (**Fig.19**).

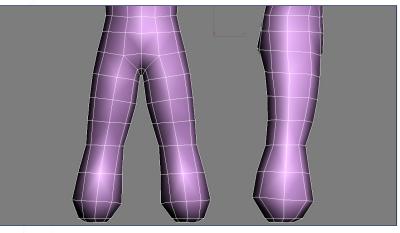


Fig 20

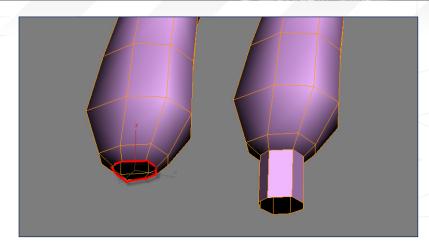
20. Here are some screenshots of the legs. Try to make it thinner at the bottom as this will represent the beginning of the shoe (Fig.20).

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Chapter 1: Concept CHARACTER MODELING WITH CEDRIC SEAUT

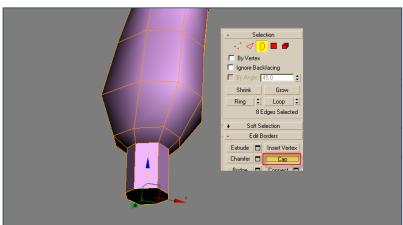
21. Select the border at the bottom and extrude it by pressing Shift. You have now a foot (Fig.21).

Fig 21



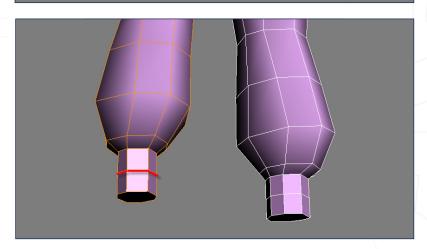
22. Once again, select the border and press Cap to close the object (Fig.22).

Fig 22



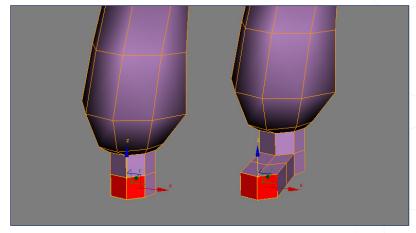
23. Create an edge loop at the middle of that new extension (**Fig.23**).

Fig 23



24. Select the two faces on the front and extrude them twice by pressing the Extrude button (Fig.24).

Fig 24



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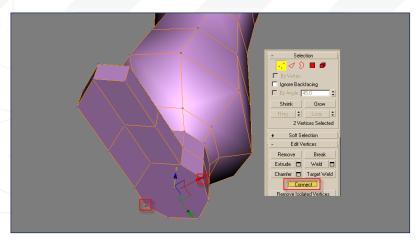


Fig 25

25. Under the shoe, select both vertices, as shown in **Fig.25**, and press Connect to create an edge.

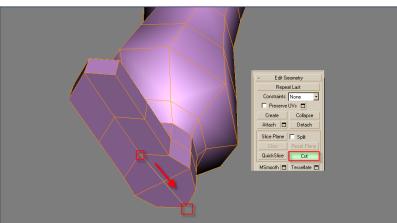


Fig 26

26. Press Cut, and then select the first vertex and the second to create the second edge. The edge at the middle of the vertices will automatically be cut (Fig.26).

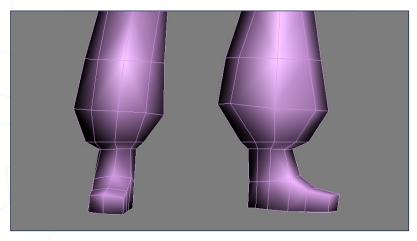


Fig 27

 $\begin{tabular}{ll} \bf 27. \ Here is a preview of the shoes (Fig.27). \end{tabular}$

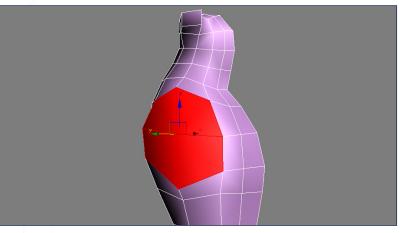


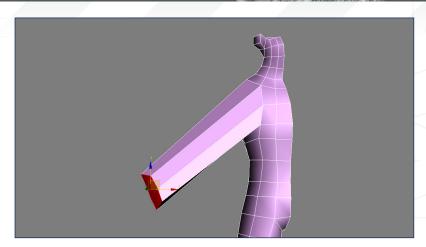
Fig 28

28. Go back to the chest now, and select the area you created before for the shoulder (**Fig.28**).

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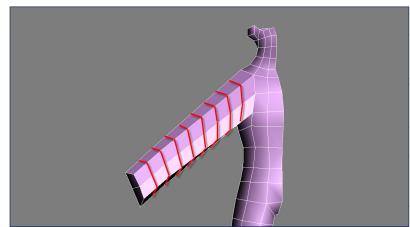
29. Extrude it, just like you've already done for the legs and torso (**Fig.29**).

Fig 29



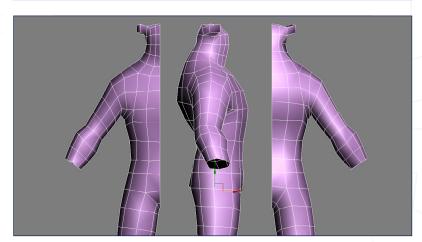
30. Make some cuts with the same technique we used previously for the legs (**Fig.30**).

Fig 30



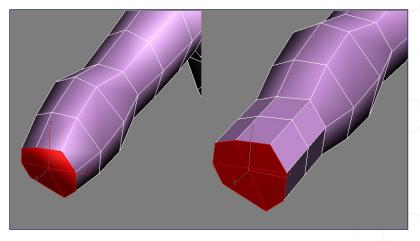
31. Move some vertices to get a rough human shape. Scale it down a little, as the last edge loop will be the wrist (**Fig.31**).

Fig 31



32. Now we are going to work on possibly the most difficult part – the hands. This character will have only 4 fingers, as this is what I have in mind for my character. So select the faces at the extremity and extrude them twice (**Fig.32**).

Fig 32



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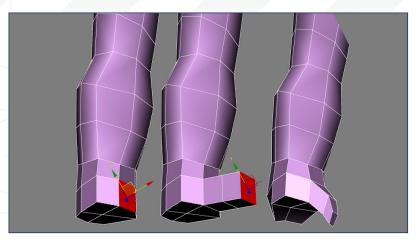


Fig 33

33. Select the face, as shown in **Fig.33**. Extrude once, twice, and then the vertices a little to get more of a thumb shape.

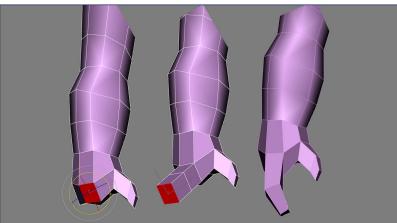


Fig 34

34. Use the same procedure for the second finger (**Fig.34**).

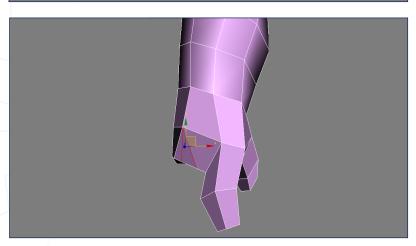


Fig 35

35. For the other two fingers it will be a little bit more complex, because we have to create two fingers from only one face. So cut the face, as shown in **Fig.35**, by pressing the Cut button (see step 26).

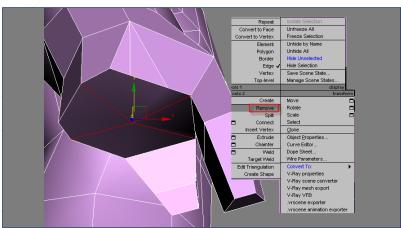


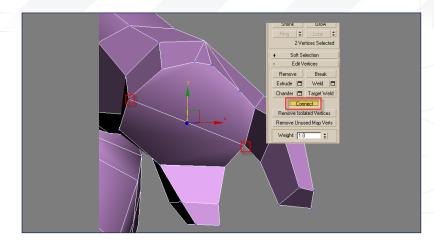
Fig 36

36. Under the hand, select the edges and remove them by right-clicking and selecting Remove (**Fig.36**). Don't press Delete as that will delete everything – faces included!

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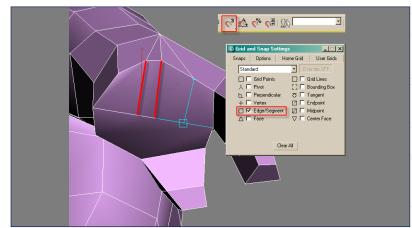
37. We are going to change edge orientation now to be able to extrude some fingers. Select the vertices and create an edge by pressing Connect (**Fig.37**).

Fig 37



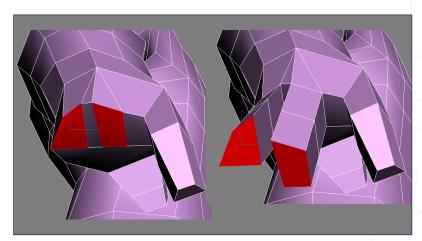
38. Now we can cut once more to prepare the bases of the finger. First of all, right-click on the Snap button in the toolbar. A pop-up will appears – tick Edge/Segment. This option is really important as it will help you to auto detect edges and you'll be able to better manage and make good cuts. So now, make three cuts by pressing the Cut button (**Fig.38**).

Fig 38



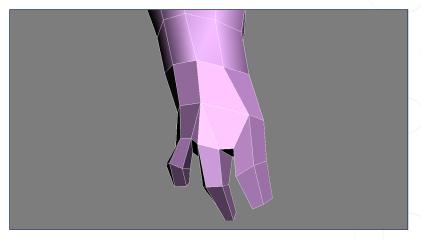
39. You are now ready to select two faces and make two extrusions from both of them (**Fig.39**).

Fig 39



40. Move the vertices to achieve a hand-like shape (**Fig.40**).

Fig 40



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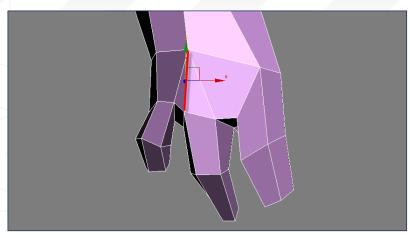


Fig 41

41. Delete the edge as shown, to keep only quads (**Fig.41**).

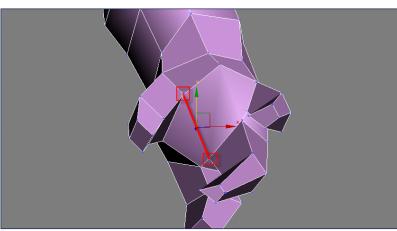


Fig 42

42. Connect vertices, as shown in **Fig.42**, for the same reason as before.

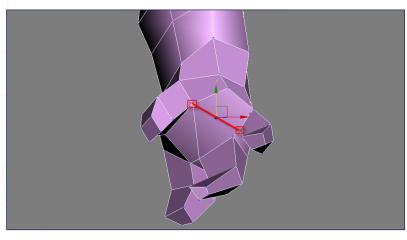


Fig 43

43. And once again for the last more-than-4-sided polygon (**Fig.43**).

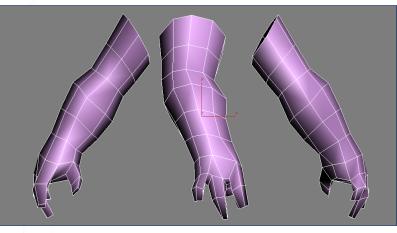


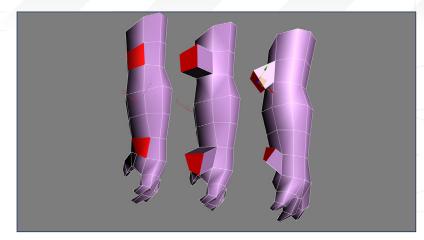
Fig 44

44. Here is a preview of the arm from several angles (**Fig.44**).

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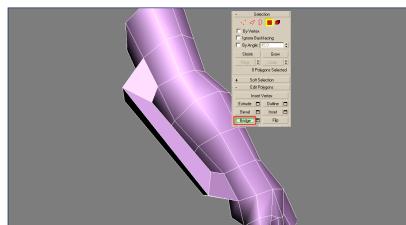
45. We're now at the final stage of the base mesh creation in Max, where we're going to flesh out his arms. To keep things simple, just select the two faces, as shown in **Fig.45**, extrude them, and then move them slightly to be more face-to-face.

Fig 45



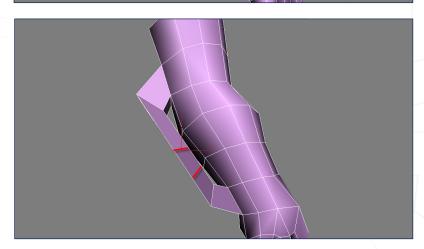
46. Keep the two faces selected and then press the Bridge button. This will connect both sides and close the object (**Fig.46**).

Fig 46



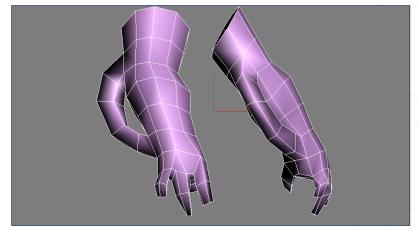
47. We'll now add some more cuts to push the new arm element a little further out (**Fig.47**).

Fig 47



48. As you've done several times now, push the vertices a little to get a more rounded shape (**Fig.48**).

Fig 48



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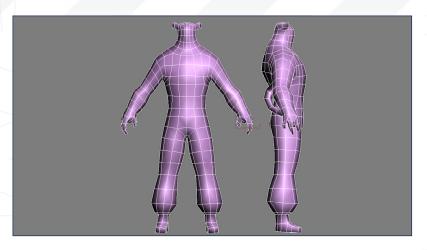


Fig 49

49. And finally, our base mesh is done. It's now time to take it into ZBrush for the sculpting part of the concept creation (**Fig.49**).

PART 1B - BASIC SCULPTING

In this second part of chapter one, we are going to see how to come up with more interesting shape and volumes in ZBrush.

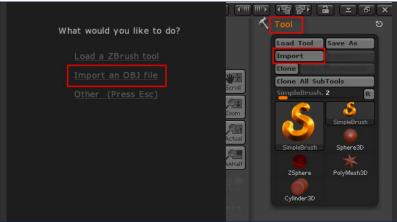


Fig 50

50. First of all, import your base mesh into ZBrush. There are two different ways to do this: you can either use the import option when launching ZBrush, as shown in **Fig.50**, or you press Escape and then, under the Tool tab, click Import.

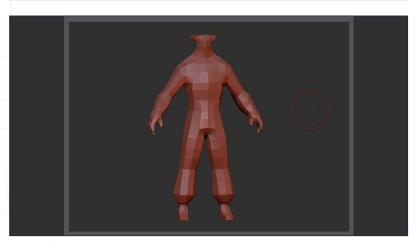


Fig 51

51. Here is a preview of what you will see on your ZBrush canvas when you import your base mesh (**Fig.51**).

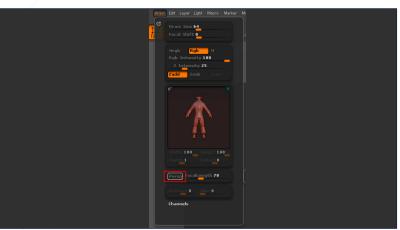


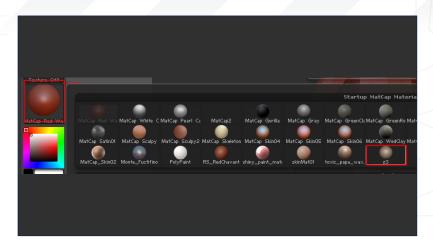
Fig 52

52. When you sculpt, it's important to keep 3D world camera constraints, in order to be sure that you have the right proportions if you decide to then import your final model into another 3D package, like 3ds Max, to make some renders. You have two options: you can go to the Draw tab and press Persp, or just press just the P hotkey (**Fig.53**).

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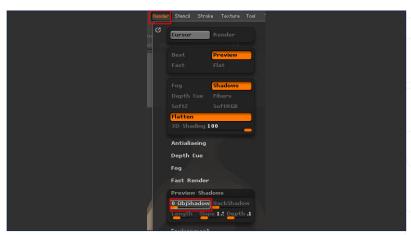
53. On the left of the screen, you should see a red ball which represents the Material Editor in ZBrush. Feel free to try some of them out to get a better idea of how it works. I usually use a very simple one, close to a standard blinn material in 3ds Max (**Fig.53**).

Fig 53



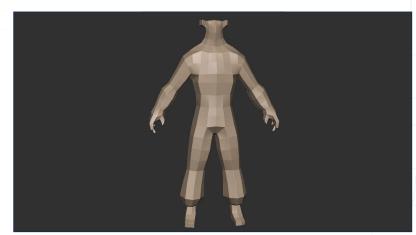
54. In ZBrush, you are able to preview some real time shadows, like screen space Ambient Occlusion. This can be pretty useful when it's time to make some renders, but for the brut sculpting it's nice to disable this option. You will have more facilities to sculpt some difficult areas, like under the shoulders. To disable shadows go to the Render tab, and under Preview Shadows slide the ObjShadow value to 0 (**Fig.54**).

Fig 54



55. Here is how our base mesh should currently look on the ZBrush canvas (**Fig.55**).

Fig 55



56. In the Tool tab, under Geometry, press Divide twice to add more subdivision to your model (**Fig.56**).

Fig 56



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Fig 57

57. We can activate the symmetry now to save some time, so go to the Transform tab, press Activate Symmetry, and choose the axis you wish to use for the symmetry. You can just choose X (Fig.57).

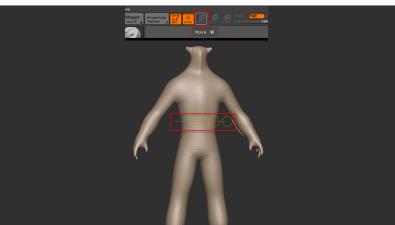


Fig 58

58. We are now going to create some selection sets, with thanks to ZBrush's Transpose function. This allows us to sculpt some difficult areas with many facilities. First, press the Move button, as shown in **Fig.58**, or simply press the W hotkey.

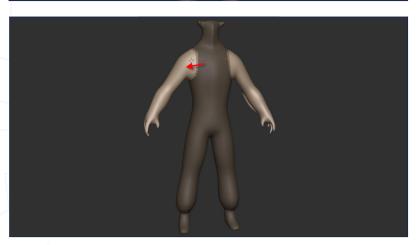


Fig 59

59. Pressing Ctrl, drag the orange edge from the middle of the shoulder to the beginning of the arm, as shown in **Fig.59**, with your graphics tablet (or mouse). When you have something close to what is shown in **Fig.59**, release your graphics tablet first, and then let go of the Ctrl key. The body should now be masked.



Fig 60

60. In the Tool tab, open the Masking dropdown menu and press HidePt. This will hide the part of the mesh you haven't masked. You have now the full body available on the canvas only (**Fig.60**).

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61. Go back to subdivision level 0 now (Fig.61).

Fig 61



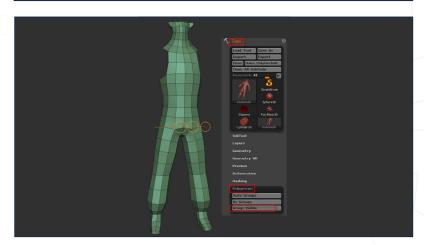
62. Press the Frame Button on the right tab. This will display the wire of your object (**Fig.62**).

Fig 62



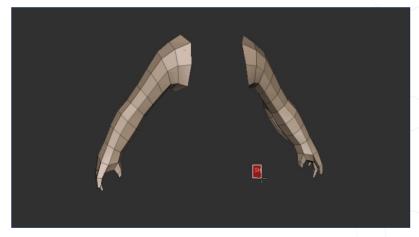
63. Open the Polygroups dropdown menu and select Group Visible; this option will tint the visible selection with a basic color (**Fig.63**). Notice that the color will only be visible if the Frame button is enabled.

Fig 63



64. Inverse the visible object part. To do this, keep pressing Ctrl + Shift, and drag a green square selection onto the canvas. Release Shift (the square should then become red), release the graphics tablet, and finally release Ctrl. You can now see arms instead of the body (**Fig.64**).

Fig 64



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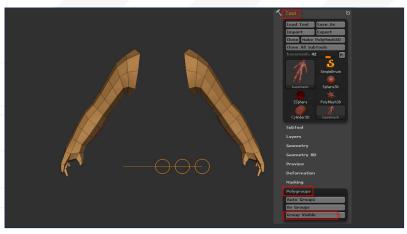


Fig 65

65. Do the same as before now: select Group Visible once again – a different color is applied to the arms (**Fig.65**).

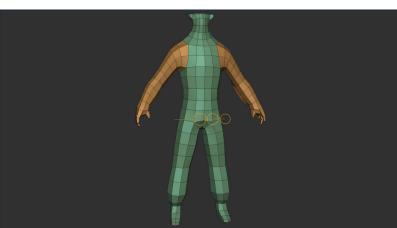


Fig 66

66. You can now display the full character by pressing Ctrl + Shift + clicking on the canvas (not on the object) (**Fig.66**).

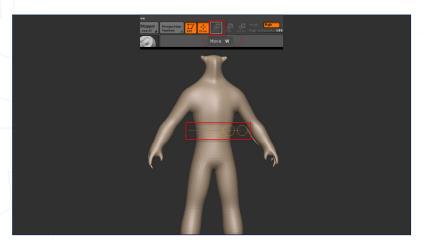


Fig 67

67. We are now going to select the last part of the character. Check that you are still in Move (W) mode. Uncheck the Frame button to hide the colors (**Fig.67**).

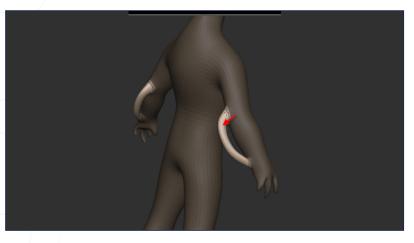


Fig 68

68. In the exact same way as before (see step 59) create a mask, this time including the body and arms, but not the extra arm element that we added (**Fig.68**).

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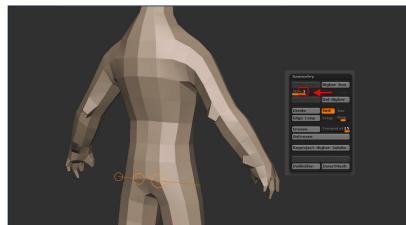
69. Press HidePt to hide the extra element on the arms (**Fig.69**).

Fig 69



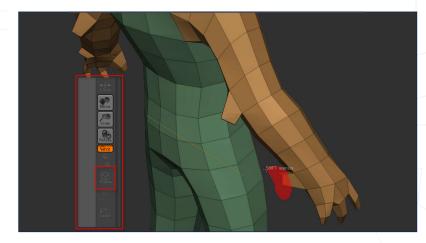
70. Go back to the subdivision level 0, the polygonal display (**Fig.70**).

Fig 70



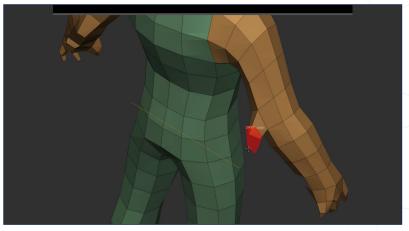
71. Enable the Frame button again to see the selection sets. Now we are going to hide the remaining polygons which don't belong to the arms. Select the Lasso mode selection, just under the Frame button. Keep pressing Ctrl + Shift, and drag a green circle around the extra polygon. Then release Shift (the circle becomes red), release your graphics tablet, and finally release Ctrl. The polygons will disappear (Fig.71).

Fig 71



72. Do the same for the other protruding element that we want to hide (**Fig.72**).

Fig 72



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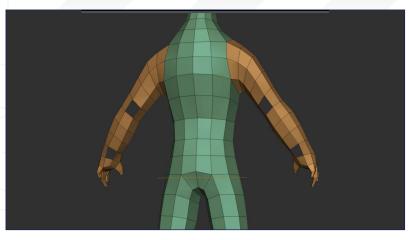


Fig 73

73. You'll need to do the ones on the left arm, too. Unfortunately you can't use the symmetry function for this, which is why we must do both sides one at a time (**Fig.73**).

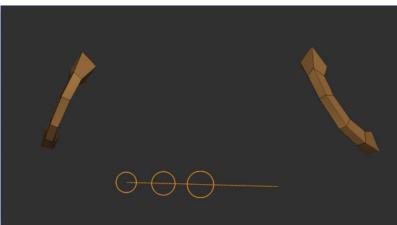


Fig 74

74. Now invert the selection as explained before (see step 64) to display only the extra arm element's polygons (**Fig.74**).

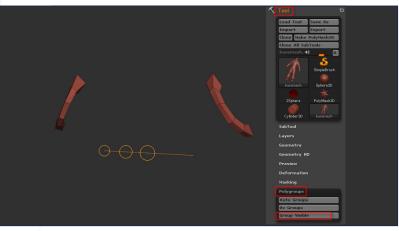


Fig 75

75. Create the last selection set by pressing Group Visible once again (**Fig.75**).

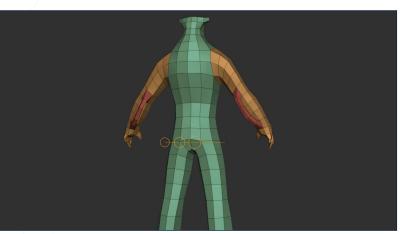


Fig 76

76. Unhide everything by pressing Ctrl + Shift and clicking in the canvas. You can now see three different colors, and therefore your three different selection sets. Now, to isolate one of the selection sets, you just have to press Ctrl + Shift and click on one on the colored parts. This will hide the ones you haven't clicked on. Simply Ctrl + Shift and click on the canvas (not on the character) to display the entire mesh (**Fig.76**).

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77. With the selection sets done now, it's time now to start sculpting to come up with a better shape for our character concept. On the left of the screen, click on the Standard brush button. A pop up will appears – select the Move brush. Before sculpting, we are going to move some vertices – like we can do in 3ds Max – with the soft selection (Fig.77).

Fig 77



78. To have a better preview of your shape, disable Frame to remove the colors (**Fig.78**).

Fig 78



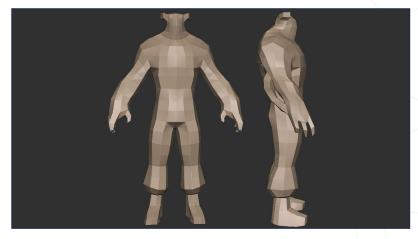
79. Here is a brief introduction with the brush parameters on the top. Select Draw mode when you are ready to sculpt, you can then change the size and the intensity of the brush by sliding the value on the right. Notice that you can also display these options by right-clicking on the canvas; it's pretty useful when you want to limit pen tablet movements (**Fig.79**).

Fig 79



80. With move brush selected, move some areas to get a stronger shape (**Fig.80**).

Fig 80



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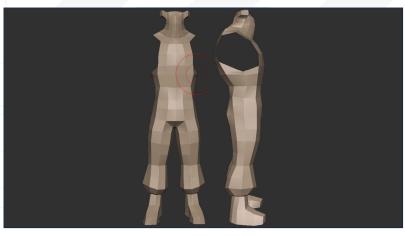


Fig 81

81. Don't forget to use the selection sets to move vertices easily without moving unconcerned parts, for example under the shoulder (see step 76) (**Fig.81**).

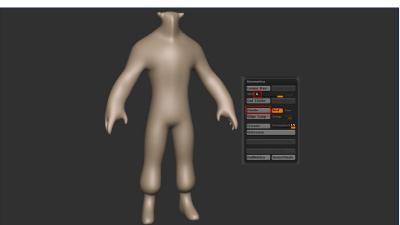


Fig 82

82. With the main shape defined, we are going to push the volumes a little more to add some definition. Keep in mind that it's up to you to decide the number of subdivisions – you just to be comfortable with it. Try to keep the Active Points number under a million polygons; we are working roughly for now. For this example, divide your model 6 times (**Fig.82**).



Fig 83

83. The following brushes will be the ones we are going to use during the concept sculpting process. The Inflat brush is used to push the volumes, the Clay brush is used to define the strong volumes, and Smooth to soften them (**Fig.83**).

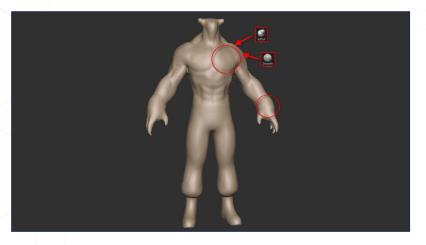


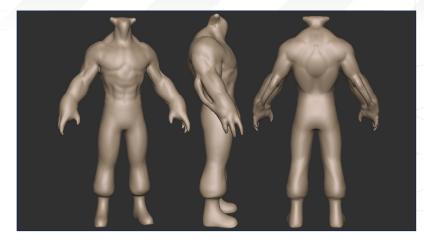
Fig 84

84. With your first attempt, try pushing the volumes to get your first intentions down, mainly using the Inflat and Smooth brushes to start with. Take your time to experiment and feel the volumes, it's still very easy to go back (**Fig.84**).

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85. Here is a preview from several angles (Fig.85).

Fig 85



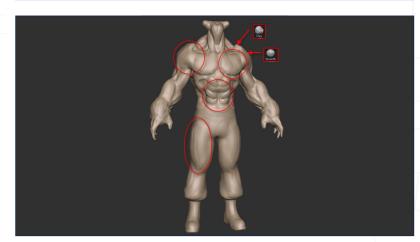
86. Once again, don't forget to use your selection sets to simplify your sculpting process (see step 76) (**Fig.86**).

Fig 86



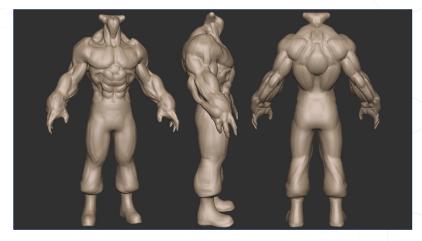
87. In the second step, push the extreme volumes using to Clay and Smooth brushes. Keep in mind that you're not thinking about the final yet – this has to be rough, so just push out your main volumes for now. The polishing will be done later, just be satisfied with the silhouette for now (Fig.87).

Fig 87



88. Once again, here are previews of several angles (**Fig.88**).

Fig 88



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Fig 89

89. Now in this last step of the concept, we are going to use several brushes to add more definition. You will notice a brush in this set by Damien Canderle, which is a free brush available at: http://www.pixolator.com/zbc/showthread.php?t=57944&page=6&pp=15 (Fig.89). This is an amazing brush for exaggerating cavities!

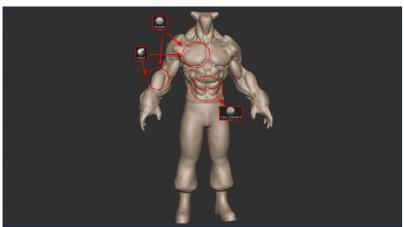


Fig 90

90. Here are some examples of these brushes in use. For the roundness of the shoulder, just use the Clay brush (with small pressure). The Dam_Standard brush is useful to force the cavities between the abs (**Fig.90**).

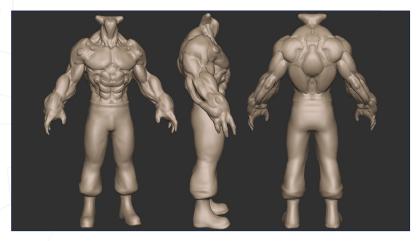


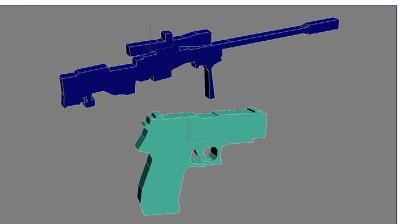
Fig 91

91. Again, here are some different angles. And this is it with the concept! We just need a solid base to be able to create and put accessories on him (**Fig.91**). Feel free to play with volumes to try different things – nothing is static in ZBrush, you have unlimited possibilities from only one simple base mesh!



Fig 92

92. Here are some accessories that I have in my personal library (**Fig.92**). Sometimes, when you have some free time, it's good to make some basic elements that you can possibly use on some of your creatures or characters. They can be very useful to help you come up with a 3D concept quickly.



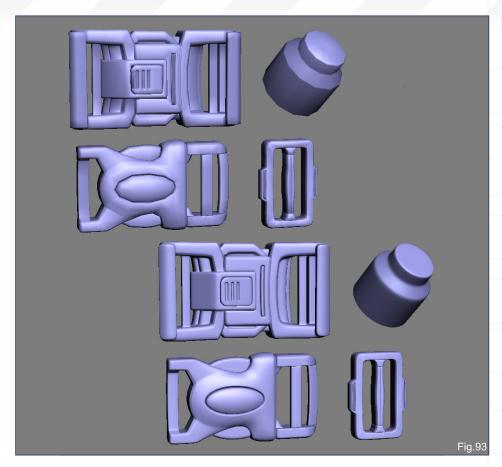
Chapter 1: Concept CHARACTER MODELING WITH CEDRIC SEAUT

- **93**. For the accessories that I don't have in my library, I create a rough prototype from a picture. I will explain the technique used for this process in Chapter 5 of this series (**Fig.93**).
- **94**. Here is the concept after placing in some rough objects. Please don't hesitate to place some simple boxes into your concept it's just the silhouette that is important at this stage. The preview in **Fig.94** has been done in 3ds Max 2010, with real time shadows in the viewport; it's a very nice function to properly pre-visualize objects and volumes!

That's all for Part 1, in the following chapters we will see how to create and polish the different elements presented in the concept design.

CEDRIC SEAUT

For more from this artist visit http://www.khalys.net/ or contact cedric.seaut@voila.fr



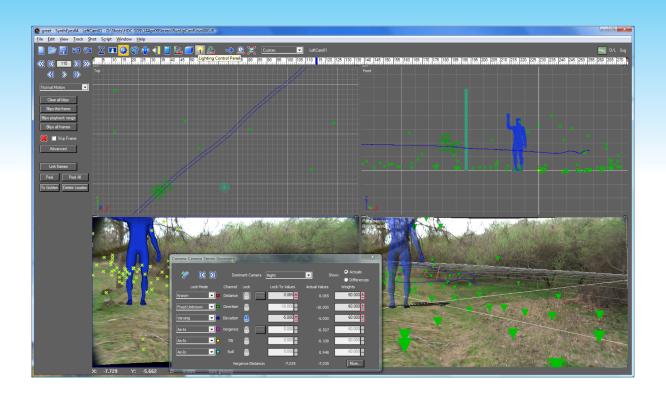


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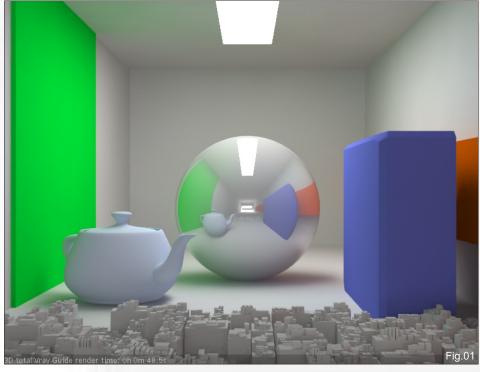


V-Ray for 3DS Max Chapter 2 - Vray Materials + Textures

Software Used: V-Ray, 3ds Max

Now that we have had a good look at global illumination in last month's issue, let's dive into the material side of Vray. We will not spend much time delving into the creative side of shader building as this is something completely different, we will rather focus on the technical aspects of Vray materials, figuring out what these buttons do. If you are used to another render engine or just leaving Scanline rendering, this will help.





Most settings are common to any render engine and there won't be any example for the usual setting.

A: VRAY MTL

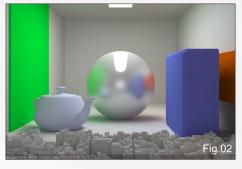
(See **VrayMtIGUUI**) Vray's Bread and butter material is quicker to render than Standard max materials and highly configurable so let's take a look at it.

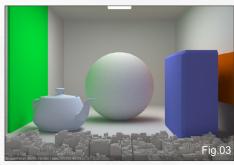
Roughness: this is used to fake dust on surfaces, not a replacement for an actual texture map.

Highlight glossiness: this controls the amount of specular reflected from the object, usually locked to reflection glossiness. Unlink them if you don't need blurry reflections.

Reflection glossiness: allows blurry reflections, any value under 1.0 will result in blurry reflections which slow down render time considerably. Lower the subdivisions to improve render times, or increase it if you get too blurry or inaccurate results.

You can use Vray's light cache option: Use



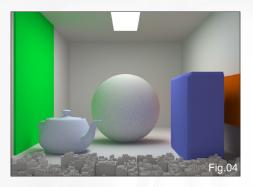


light cache for glossy rays to speed up render but remember however that a low light cache setting will result in incorrect reflections.

Fig.01: 127.127.127 reflection value, 1.0 highlight and reflection glossiness

Fig.02: 127.127.127 reflection value, .75 highlight and reflection glossiness

Fig.03: 127.127.127 reflection value, 0.1





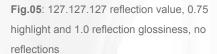


Fig.06: 127.127.127 reflection value, 0.25 highlight and 1.0 reflection glossiness, no reflections

Max depth: used in reflections and refractions this will set a limit in Vray for how many times a reflection or refraction will bounce inside an object. It can be overridden in Vray's render dialog with more depth resulting in longer calculations.

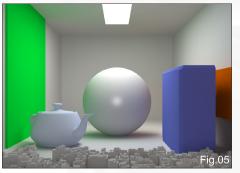
Fig.07: max depth at 5

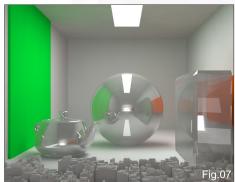
Fig.08: max depth at 2

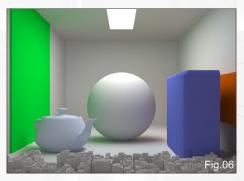
Affect shadows: creates transparent shadows through refractive objects, only works with VRay lights

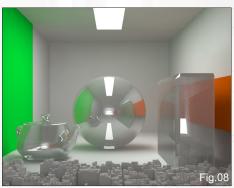
Fog: simulates colored refractive objects, such as dirty water, tinted glass etc... this will change the color of the object as well as the shadows cast from it.

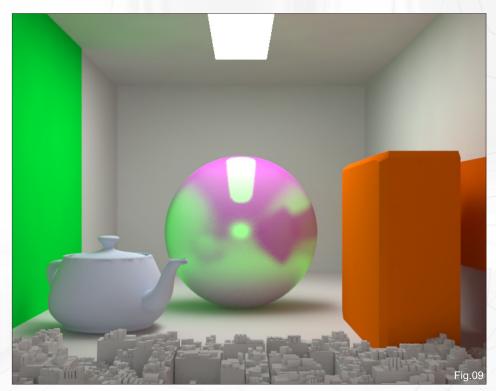
Translucency: basically this is SSS, you need to have a glossy refractive material in order to use this, hybrid model is the most accurate; use back side color to tint the SSS shader. The scatter coefficient determines the ray's angle travelling through the object. 0.0 means light











goes in all directions, 1.0 means light can only follow its initial direction.

OPTIONS:

- Cutoff: threshold to control when to compute or not reflections or refractions, do not set this at 0.0 as it will greatly increase render time (I personally have never changed this setting).
- Environment priority: used to prioritize environmental reflection or refraction previously set over reflecting and refracting the actual scene, useful with HDRI environments.
- · Energy preservation mode:
 - RGB: blends the reflection color with the diffuse color in the render Fig.09

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 Monochrome: the reflection color has a very high impact on the final result Fig.10

B: VRAY DIRT

(See VrayBlendMtlGUI) Used to produce AO maps Fig.11, can also be used to blend texture maps along corners. Keep the distribution and falloff at 1.0 for a correct diffuse light, radius depends on scene scale.

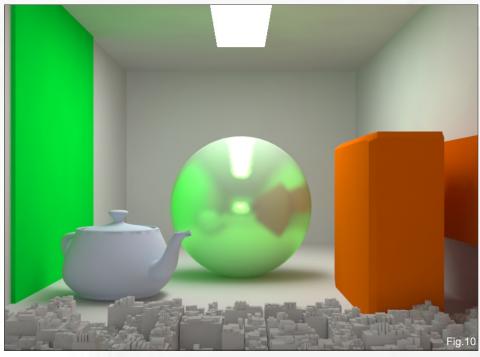
Subdiv: controls the number of samples computed increase this if you have noise; this has a direct effect on rendering time.

Consider same object only: leave unchecked for a global AO render, check it to have a per object AO render.

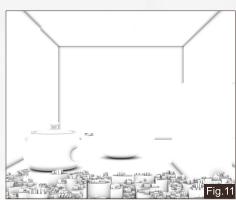
C: VRAY LIGHT MTL

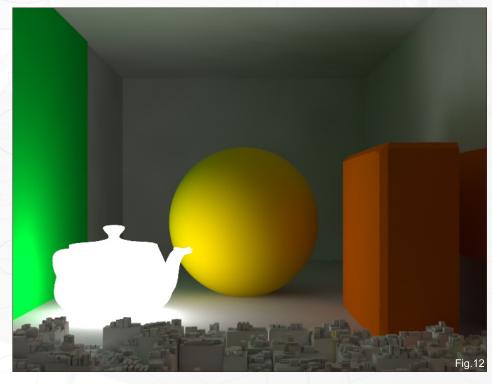
(See VrayLightGUI) Allows you to emit light from an object, bear in mind in most cases you will need to increase the GI solutions settings to produce smooth shadows, especially the hemispherical subdivisions.

You can plug texture maps to the light emission and opacity; this will affect the light strength and color.

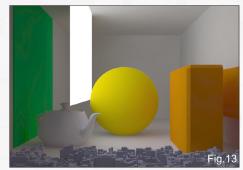












Emit light on back side: applies the double sided option to the light emission.

Fig.12: standard VrayLightMtl setup

Fig.13: standard light setup with a plane

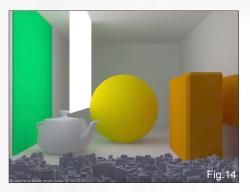


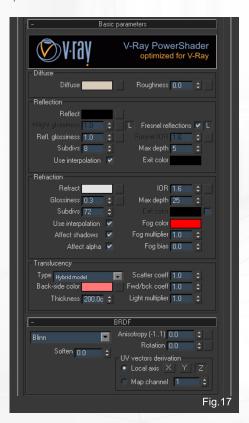
Fig.14: checked emit light on back side

Fig.15: with texture map and opacity map

D: VRAY SSS

(See VrayFastSSSGUI) A very difficult shader to use, to be used in conjunction with VRay blend use VrayFastSSS for the base material and plug VrayMtl's into the coat material section. The problem with this SSS setup is the scale, as each radius setting is linked to the scene scale, a high level of precision is required to get this shader to work properly.

Prepass rate: this is the resolution of the SSS solution, -1 means half of the image size, -2 is a quarter etc...









Diffuse Roughness: defines the type of material to simulate, a value of 0.0 is a diffuse material such as skin, a value of 1.0 means a more translucent material such as tinted liquids. I personally don't recommend this particular shader for SSS solutions, either get a hold of VrayFastSSS2, or use basic Vray's translucency and build a material using glossy refractions.

Fig.16: here is an example of a head rendered using VrayMtl with glossy refractions, (**Fig.17**). Render time are quite high due to the subdivisions needed.

E: MORE Vray map

Used for adding reflection and refraction to

standard max shader, use over standard Raytrace map.

VRAY EDGE TEX

Adds edges to an object during render if Scanline rendering is no longer an option, works with both screen and fixe size.

Unsupported

Raytrace map, reflect refract map, flat mirror map and translucent shader do not work with Vray at this moment.

Same thing for texture baking, only use Vray's texture elements when outputting baked texture maps.



VRAYMTLWRAPPER

(See VrayMtlWrapperGUI) Used to create mattes, this can be done under Vray's general object settings, but this material overrides it.

Set the alpha to 1.0 to have the opacity control the alpha contribution to the final render, a value of 0.0 removes the object from the alpha channel, finally a value of -1.0 makes the object cut the alpha.

The reflection and refraction settings only works with a VrayMtl

GI surface ID: use in light cache, change this value if you have light leaks between different objects during light cache calculations.

VRAY2SIDEMTL

(See **2SideMtIGUI**) To be used with planes, puts one material per side, useful for leaves,

curtains and paper. **Example**: Plug a dark material in the front section and a light one on the back section, point a light behind the object, turn on "force single-sided sub-materials" and the light shader will be rendered where the light hits

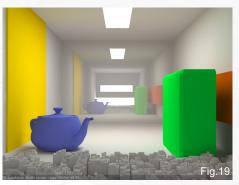
Fig.18: a light has been placed outside the scene, and the walls have a 2SideMtl plugged with a yellow back color.

F: VRAY OVERRIDEMTL

(See **VrayOverrideMtIGUI**) This will allow you to have additional control over the way reflection, refraction, GI, and shadow works with a particular shader.

You can have one shader for direct visualization, and another for the reflection of the object, or another to control the way light bounces in GI etc...







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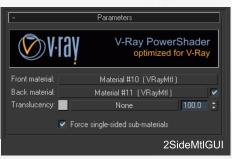




Fig.20: scene with override material on the teapot and left panel for reflection, and on the ground floor for GI.

CONCLUSION

Well that was a overview of Vray's materials, pretty much everything is possible with it.

One piece of advice would be not to use full white materials if you plan to use any solution of global illumination as this will increase render time unnecessarily. Instead of using 255.255.255 colors just go a little under.

Be sure to catch next month's chapter for more VRay goodies.

ERIC ENNIS

For more from this artist visit http://www.Eric-Ennis.com









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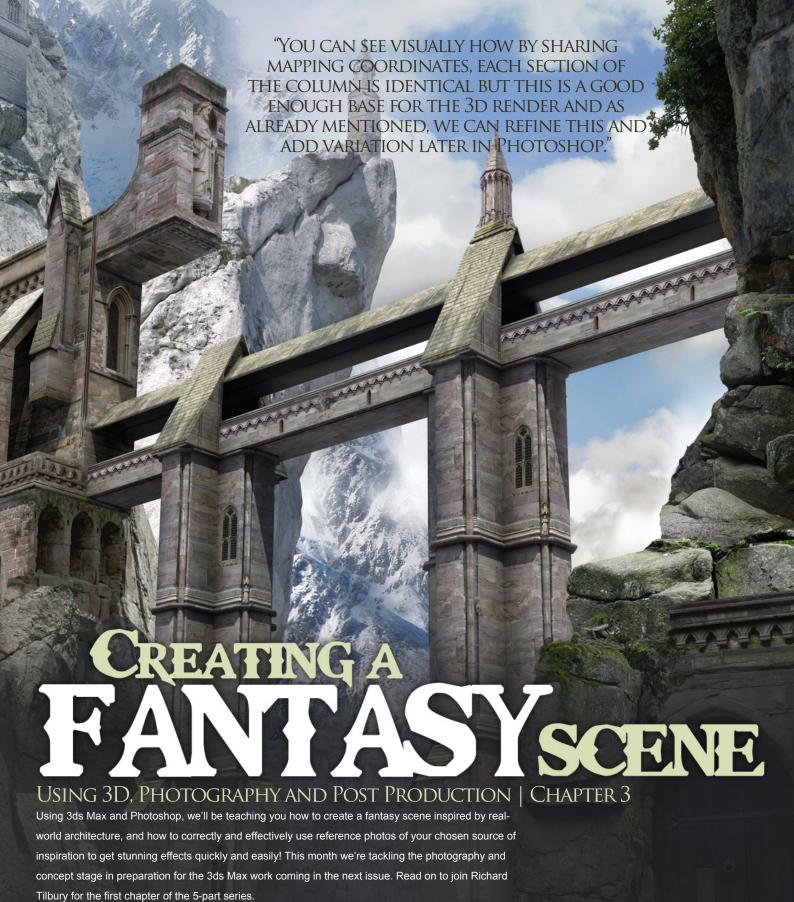
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THIS ISSUE:

This chapter will look at using Photoshop to extract textures from the location photos and how these can be assembled into texture templates that can be mapped onto the 3D models to provide a base for further enhancement.

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Creating a Fantasy Scene Using 3D, Photography and Post Production: Chapter 3

Software Used: 3ds Max and Photoshop

INTRODUCTION

During the course of this tutorial we will build a fictional scene inspired by an existing location, in this case a cathedral. The building itself will dictate the style of architecture used throughout and will essentially be reorganized into a different structure altogether. All of the architectural forms and details will be extracted from the cathedral itself and after being deconstructed shall be reassembled to assume a new design, rather like building with Lego if you like.

The building will then be placed into an imaginary environment and will start its life cycle as a 3d model built inside 3dStudio Max. Our 3d package will be used to create the lighting and perspective as well as setting the camera position / viewing angle.

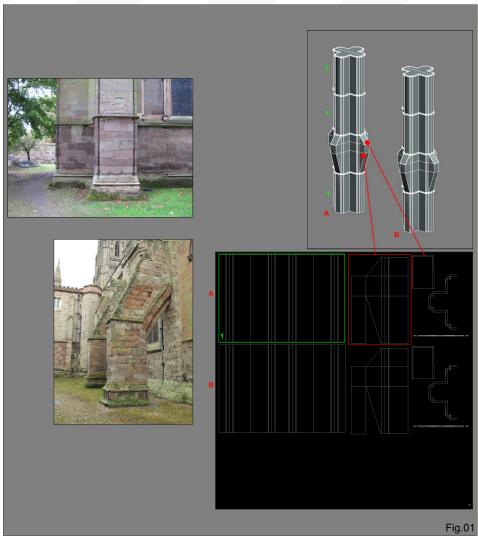
Photographs taken of the site will then be used to create rudimentary textures used to map the building. 3d Totals free library of reference photographs will be used to construct the scenery in a way akin to matte painting as well as add finer details to the building model.

The final stage of the tutorial process will involve revisiting the location in order to photograph certain parts of the cathedral from specific angles to match the perspective in our scene.

These photographs will then be edited and used to add extra detail and further refine our image.

CREATING BASE TEXTURES FOR THE COLUMNS.

During part 3 we will look at how to use our location photos to extract and create textures for our 3d scene which will form the base layer for compositing in further detail later in the tutorial.



We will begin with the columns as these are one of the principal 3d elements. In **Fig.01** you can see the unwrapped geometry in the bottom right corner which represents the two columns in an exported wireframe template (top group is column A and lower part is column B).

As you may remember from part 2, only one section of the column was made and mapped initially. This was then duplicated to create the four sections that make up the whole piece. Therefore the rectangular area labeled 1 corresponds to the three sections in the 3d render and whatever texture is placed here will appear on each of these sections. This saves texture space and because this scene will utilize post production techniques we can use Photoshop to add variation later on the render itself

Having sifted through the photos I decided that the two on the left were the most suitable for texturing the columns (namely the areas ringed in white).

These photos are available in the free library available at 3DTotal:

Image 01 Image 02

The first step is to make a selection around the area you wish to use and then copy this into your PSD file using your wireframe template as a guide.

Scale and position it accordingly and then duplicate it to fill in the desired part of the template. This will obviously not yet be tileable but there are two ways to solve the problem.

Using 3D, Photography and Post Production: Chapter 3 CREATING A FANTASY SCENE

Note: Making these cropped sections tileable is not wholly necessary given that much of the refinement will be done during post production and hence can be fixed in Photoshop, but it is useful to be aware of the procedure as it can prove valuable and is always worth knowing.

- Flatten the duplicated stone into one layer and then use the Clone Stamp and Healing Brush tools to hide the seams.
- Use the Offset Filter on the original cropped section of stone to make it tileable and then copy this into our template.

OFFSETTING

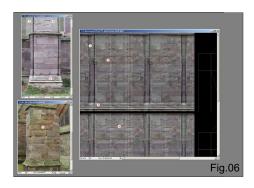
In **Fig.02** you can see the cropped section of the wall from the photo in Fig01. The width and height measures 810 x 1374 and so to make it tileable go to Filter – Other – Offset and enter half these values in the corresponding boxes (see right dialogue box).

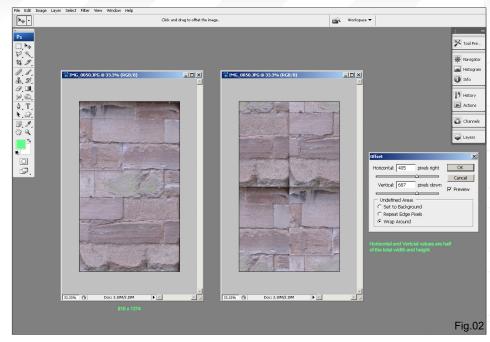
This flips the outer edges into the centre and shows the consequent seam which would appear when tiling the image as it stands.

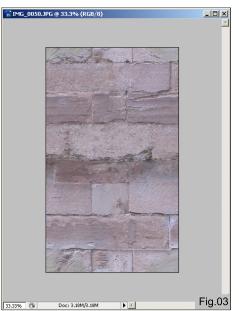
Use the Clone Stamp and Healing Brush tools to conceal these central joins but making sure to leave the edges intact.

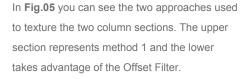
Fig.03 shows the corrected texture which no longer has an obvious seam through the central axes

To revert the texture simply apply the Offset once again and the image will flip back to its original format, with the central axes now forming the outer edges (**Fig.04**).



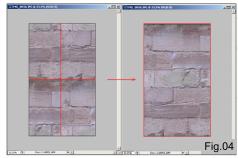


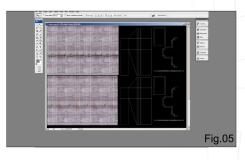




Any texture unless completely uniform and symmetrical will create a tileable pattern to some extent but you can see how the Offset method at least removes the seams.

It is up to you which approach you take but remember that even if you clone out any symmetry here it will appear on the actual geometry as this section is mapped to the four modular pieces of the mesh. Whatever





you do now will minimize the work later during post production but either technique is valid ultimately.

For my base layer I chose to blend areas from two principal images as shown in Fig.06.

Evidently the stone work is a different color in each photo and so they need to be made consistent. I do this by going to Image —

Adjustments and then use a combination of Curves and Brightness/Contrast to align the tonal values, followed by Color Balance and Hue/Saturation to match the color scheme.

These were not made tileable beforehand but

were rather cloned in the template, similar to method 1 above. The numbers highlight some of the photo details evident in the texture. The bottom section of the column uses the base of the pillar in the upper photo and the corners of the 3d column correspond to the upright sections numbered 1.

To keep the texture consistent I copied sections of this stone to fill in the other areas. I used the upper photo in **Fig.07** to create some variation and weathering and the tiles from the lower image to detail the small roof.

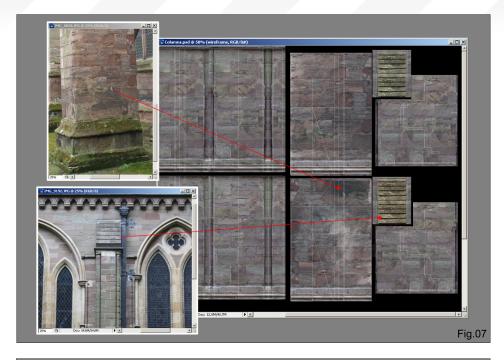
The top group of textures corresponds to the left column in Fig.08 and the lower set to the right hand one.

You can see visually how by sharing mapping coordinates, each section of the column is identical but this is a good enough base for the 3d render and as already mentioned, we can refine this and add variation later in Photoshop.

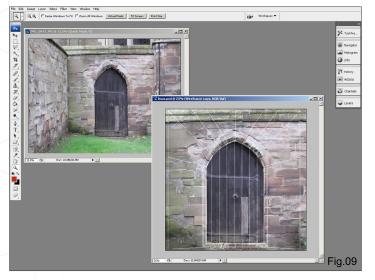
CROPPING AND TILING

With regards to the foreground door you may recall the design was modeled on a photo and so the texturing here was very straight forward. I grabbed an area of the photo and simply pasted it into my wireframe template (Fig.09).

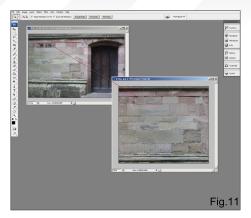
I scaled and positioned it accordingly and then applied it to the scene (Fig.10).









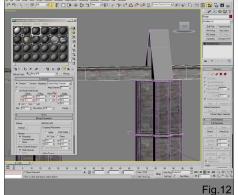


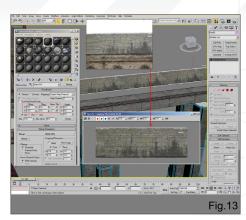
In the case of the bridge section which was made up of a simple box all I needed really was a tileable texture of some stonework. As this 3d element occupied a small proportion of the final render it did not require much detail as this could be added later.

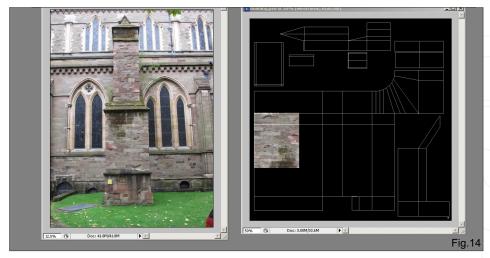
I selected a suitable image of a wall which I then cropped to include just the relevant area. I rotated and skewed the new image to make the stonework and edging parallel by going to; Edit – Transform – Skew / Rotate / Distort etc.

Once this was done I applied the Offset filter to make the image tileable (Fig.11) and cloned out the dark coloured stone which would look too conspicuous.

Once done I applied this map to the bridge section, making sure to tick the Tile boxes to texture the entire surface. You will notice that I have altered the V Offset value which has moved the lower edging to the top edge (Fig.12).







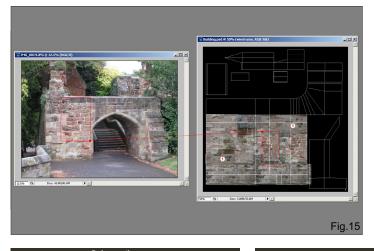
I used the same technique on the roof above the bridge. This time I cropped and transformed the roof tiles from the photo (inset Fig.13) into the texture seen below. This was then tiled according to the values seen on the left in the material editor.

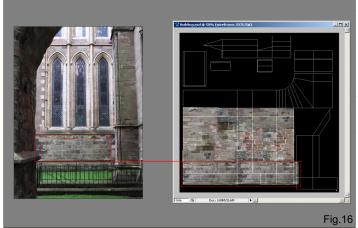
Main Building

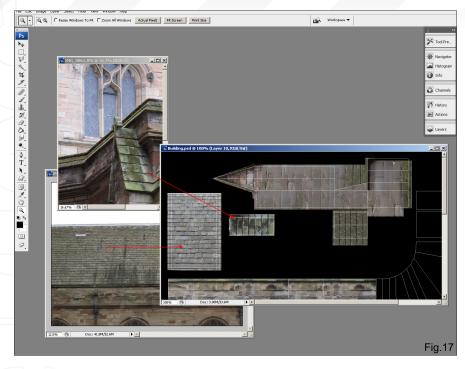
The building on the far left is composed of a few elements and so needed to be unwrapped. To texture this I selected a number of the photos

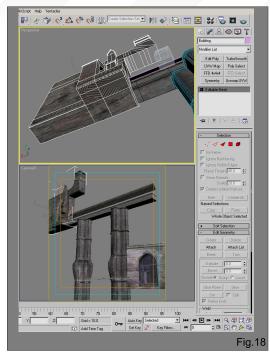
and grabbed various sections to add variety across the surface. In **Fig.14** you can see the middle section of the pillar has been used to texture part of the left edge.

I selected two more photos and repeated this procedure to fill in the rest of this building section (see Fig.15 & 16). You may have noticed also that the areas labeled 1 have been extracted from the wall under the right hand window in Fig.14.









In Fig.17 you can see two further examples of how the roof tiles have been taken from two separate photos and transformed to fit our template.

This part of the scene is built up in the same manner as the columns, using a collage of different references which are then color corrected. Seams and edges were then disguised and blended once each of these component sections were merged into a single layer.

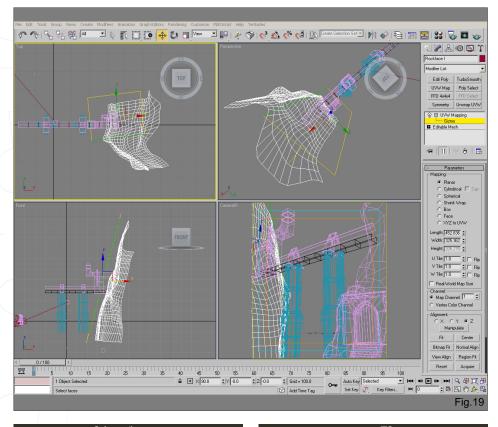
You will notice that some of the stonework has not been merged together but this is because these edges are hidden in the final camera render. No need to spend time on areas that will be hidden so be sure to make render tests as you work in order to focus on the crucial parts.

In Fig.18 you can see how the underside of the building has not been mapped and therefore does not occupy any significant part of the template. The reason for this is because in the final scene this will be hidden from view by the rock face it sits against.

ROCK FACE

To create a good starting point and base texture for the rock it is a case of first of all adding a Planar Map to the geometry. Because this is not flat it will require you align your mapping Gizmo to the general angle of the mesh. If the mesh curves away from the camera, focus on the section that will be most apparent. As this will use a single image projected onto the surface, I opted to add smoothing to the mesh to prevent any harsh shadows caused by the geometry conflicting with the actual texture.

In **Fig.19** you can see the mapping Gizmo in the form of a yellow rectangle with one green side. Notice in the viewports how the angle is aligned with those faces that are visible to the camera. The faces furthest away will show distortion but



this is not important; in fact some of these could in fact be deleted.

I chose an image of rock from the resource library at 3DTotal (which you can see here) and then altered the mapping coordinates in order that I could position certain details in specific areas.

The texture can be seen in the scene in **Fig.20** with two seams caused by manipulating the Tiling coordinates (highlighted in red). This is not a problem because as we have emphasized earlier, these issues can be resolved in Photoshop.

The near rock face will be built up using photos within Photoshop and so will not require any mapping or textures.

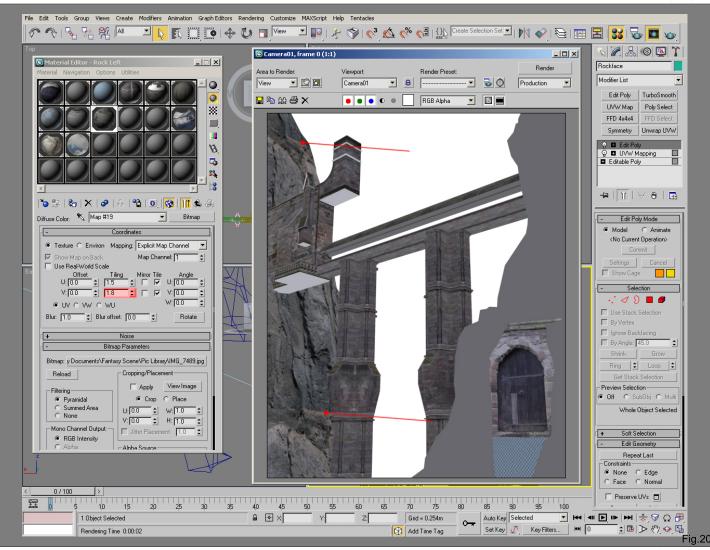
You can see however that very quickly we have a good base of textures to work, providing a sufficient foundation upon which to improve and refine the detail. The main objective during this phase is not to produce finished results but instead to create a framework or structure that will from the backbone of the final image.

Next month we will add in the back plates and look at some Photoshop techniques to composite in various elements such as the foreground detail and see how we can blend these into the scene.

RICHARD TILBURY

For more from this artist visit http://www.richardtilburyart.com/ or contact: rich@3dtotal.com









3DC next months issue of 3dcreative

Interviews

Cesar Dacol Jr.

Tutorials

V-Ray for 3ds Max:

Chapter 2 - Vray Materials + Textures by Eric Ennis

Environment Lighting: Outdoor Scene

Chapter 2 - for 3ds Max + Vray 3ds Max + MR, Maya, Cinema4D

Cedric Seaut Character Modeling

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Image by Cedric Seaut



MILITARY ROBOT

Software Used: 3ds Max, mental ray, Photoshop

INTRODUCTION

First of all I would like to welcome all readers as well as to give thanks to the crew of 3DCreative magazine, especially Lynette Clee, for the opportunity to share with you the creation process of my latest work, "Military Robot". A good idea would be to also introduce myself: my name is Łukasz Pająk, I derive from Poland and reside in Wroclaw. Enjoy reading!

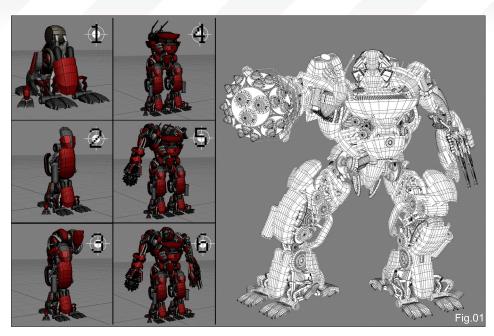
INSPIRATION

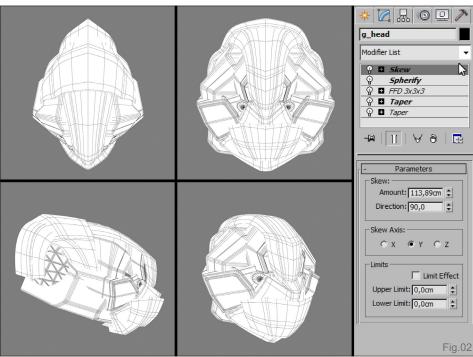
Like any artist, I need inspiration to drive me into work. The main things that pushed me to commit to this particular artwork were the outstanding drawings of Josh Nizzi. He's a great artist with good technique and unparalleled ideas. I encourage everyone to visit his website (www.joshnizzi.com).

REFERENCES

Usually before I begin any project, I try to get to know my subject as best as I can. This research defines my approach to the project and my future actions. Basically, working on the given model, I consider what possible details can be captured via textures and what must absolutely be modeled. When approaching this particular project, I was obliged to get to know the structure of metal and I'm going to talk more about materials later on in this Making Of.









MODELING

In this section I will focus on the modeling process, which wasn't difficult and didn't require any complicated tools. The whole model was constructed by using the "poly by poly" technique, which is the creation process you can see in the enclosed illustration of **Fig.01**. During the production I used modifiers such as: bend, symmetry, xform, FFD, spherify, taper, skew. These helped me make the final shape of the head (**Fig.02**).

POSING

When the model was completed, I proceed to the next step: posing. For this purpose, the relevant parts of the robot were grouped together and

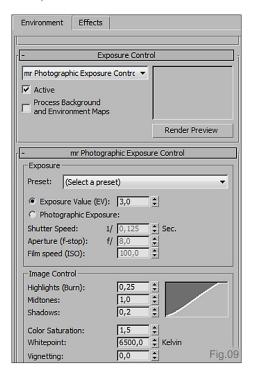


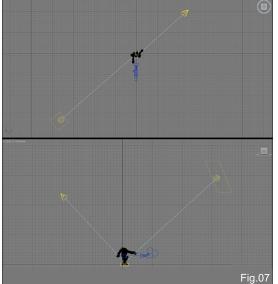


their axes of rotation moved into the place of the joints (Fig.03 - pivot points are highlighted in blue). Then, as the elements were grouped with help of the select and link tool, they were linked into the hierarchy (Fig.04). The results of my efforts can be seen in Fig.05 & Fig.06.

LIGHTING

This is one of the most difficult stages that the artist must face. In the greatest measure, the light gives the scene a whole, unique atmosphere. It introduces us to a certain mood.

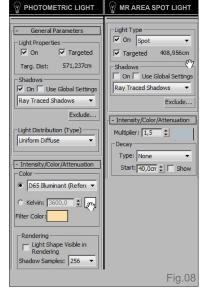




Bad lighting can easily spoil a good model. In this case, I wanted to show the best features of the model, the details which I had so precisely modeled. For this purpose, I used two kinds of light: photometric target light and mr AreaSpot (Fig.07). Their individual parameters can be seen in Fig.08. The photometric target light served as the main source of the lighting while the mr AreaSpot worked as a back light. In connection with the photometric lights, it's also important to adjust the exposure time (Fig.09).

MATERIALS

The materials used in the scene were Arch and Design materials. Their exact settings



are shown in **Fig.10**. For their creation I used templates which I then adapted to my own needs. To achieve realistic reflections I used HDR maps.

RENDERING

The whole scene was rendered with mental ray with standard settings. Elements that were changed include the sampling quality parameters. Values of sample per pixel, were respectively set to 4 (minimum) and 16 (maximum) and the filter was set to Mitchell. I didn't use indirect illumination; I simulated it by using 3ds Max's shader ambient/reflective occlusion which was injected into the diffuse slot

of the standard material. To simplify things in the next step I rendered different passes including: ambient occlusion, shadow and an additional layer of robot armor. You can see the various passes in Fig.11.

COMPOSITING

The resulting render wasn't too attractive, but that didn't cause any problems. Before I'd begun working on a model, I'd established that the scratches of metal, dirt and other details would be added in post production. With this knowledge I didn't have to deal with such tedious and time consuming mapping.

The whole scene was rendered on the nonattractive background, and then I proceed to the next step, which was the separation of the model from the background. For this purpose I used a previously generated alpha. Unfortunately, erasing the original background also resulted in removing the shadows from the ground. To help with this, I created a shadow pass (60% opacity, blending mode: normal).

To increase the contrast between each part of the robot, I additionally put on the occlusion pass on top with blending mode set to color dodge.

At this time I also began working on the background. As the base I'd used had a black and white gradient, on top I added a white glow mixed with a cloud layer set to soft light mode.

So far, the model still looked like new, but I wanted it to look like a used military machine. To achieve this objective, I began to add scratches,

abrasion and chipped paint. For this purpose I hid the additional armor layer with a mask and then began to paint on with a white color to reveal the aforementioned scratches.

The temperature of the picture seemed to me to be too saturated; therefore I decided to reduce it by using curves. To further spice up the appearance of the image I added additional elements such as light, text on the panels, the additional dirt and abrasions. This process can be seen in **Fig.12**.

And here's the final image (Fig.13)!

CONCLUSION

Working on "Military Robot" took me less than four days. This was mainly due to the omission of the mapping part. Unfortunately, you can't apply this method for models you want to animate, but in other cases you can enjoy using this method.

Thank you for your time!

ŁUKASZ PAJĄK

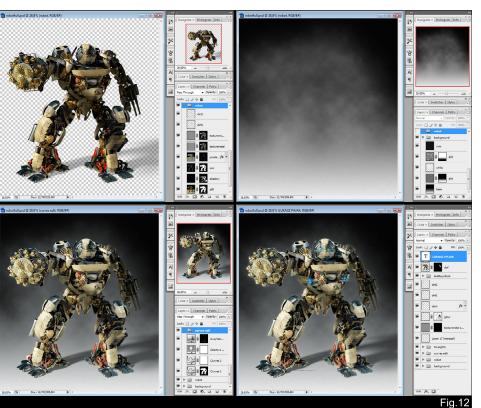
For more from this artist visit http://www.monkey-graphics.pl or contact

lukpajak@gmail.com

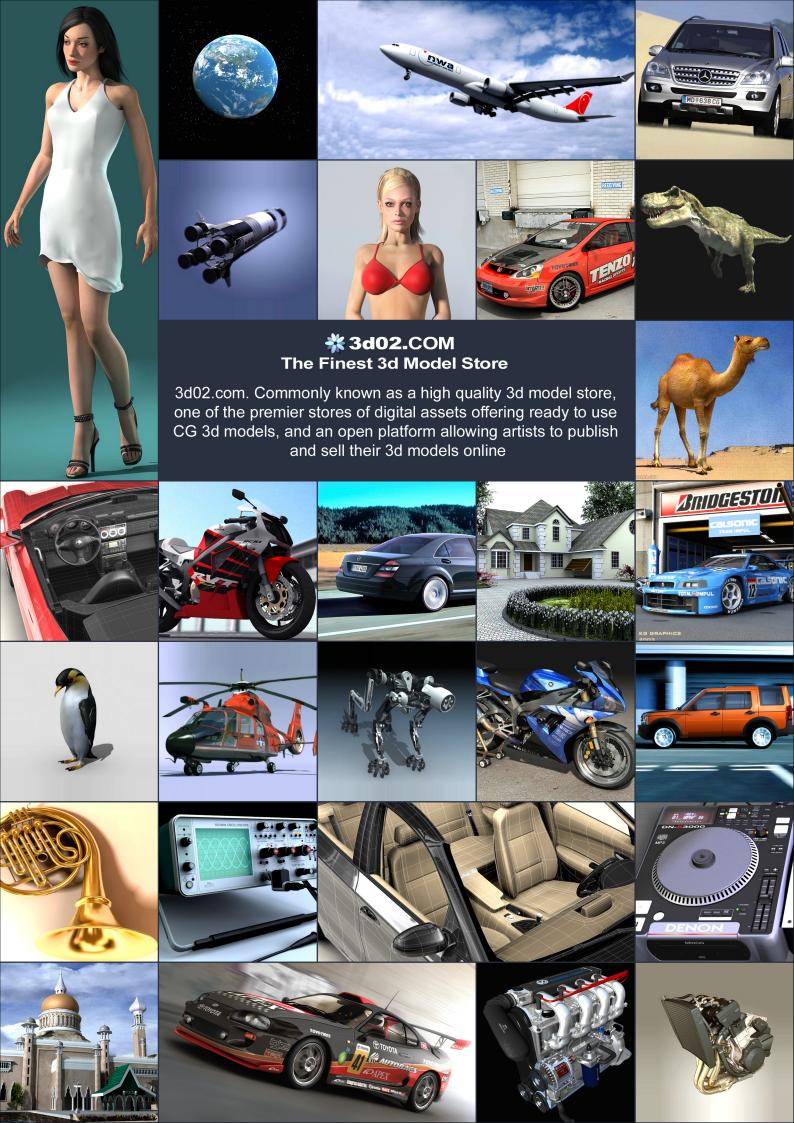














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This month we feature:

"LONELY DRIVER"

BY ANDREI KASHKIN







Lonely Driver By Andrei Kashkin

SOFTWARE USED: 3d Studio Max, V-Ray, Vue and Photoshop



3: 36 Studio Max, V-Ray, Vise and Photoshop
Linnico Diuminico Max, V-Ray, Vise and Photoshop
Linnico Diuminico Max, V-Ray, Vise and Photoshop
Linnico Max, V-Ray, V-Ray,



holds of the desert, which I wanted to use in order to underline litings of emptiness and loneliness, but also to find images of a style. In the end, I decided to go with a different kind of scene rang resistand with an old 1980s gas station, with the 1970 Doinger car parked in front of It (Fig.01a - b).



SCENES

MODELING
I started by modeling the basic objects in low quality, in order to gauge the necessary composition early on. Affirmed all of the objects in the score weem radie from primitives that were converted into editable polygons and then edited. Once objects displayed the correct geometrical form and blooked natural, I applied chamifers along that comers and other affected the vertices manually or by way of the Noise modifile. The car, as the center of the composition, was modeled in high detail (Fig. 02).

Bushes were created using Onyx Tree Storm. I made some offerent types of bushes, changing the parameters of the standard present. I also created the direct-ye stalks of the grass here, too, and for the grass arrangement. I used the Ady Pasides Cognits will deferent options for rotate, inclination and scale. Some kinds of grass were also modedel manufally and multiplied using the Scalet function (Compound object. To place the grass in the cacks of the asplata. I dive spilles on the displacement structure; these spiries were than scattered (Fig. 03).

18









ssic photography to capture my image, in order to achieve a dramatic shot with good nposition (Fig.04).

Conflorence to the lighting setup was a very important part of the creation process of this work. With well-established lighting it is possible to achieve tremendous results. I used the sky's HDR, which was made in Veri (Fig. 66 = -b.); worked well as the intensity of illumination and its color depended on a sky feature. I therefore got ind of any wrong disjustement sources of illumination and the nendered picture looks natural as a result. I wanted the sun to be behind the clouds, close to the horizon line in order that the scene received illumination and a parameters were set in the Almosphere Eddor. When I achieved some nice results, I rendered the sky in an HDR file. I also used additional light sources. a VRPs, Light dome for the whole scene (this way it was possible to supervise the brightness of the scene at invariable brightness levels of the sky).





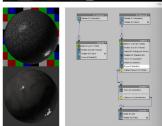
SHADERS & TEXTURES
For the texture creation I used photos from the internal and dirt masks from the Total Textures collections. The majority of the materials were made as VRayMtl shad with diffuse, bump and reflection maps. Sometimes for the bump maps I used noise and smoke maps or

Scenes

SCENES

ombination in a mixed map. You can see some imples in Fig.06a - c. It was necessary to give special inflion to the wet asphalt, as there were two types used he scene (Fig.07). As a basis I took materials from ymaterials. de, but they did need to be altered in order me to achieve the necessary results.







RENDERING & POST-PRODUCTION

The scene was rendered using V-Ray, without GI in ord to reduce the render time and PC resources. Standard options were used; I only changed arti-aliasing on Catmull-Rom and in the adaptive subdivision window image sampler, and I changed the value of Cli tresh to









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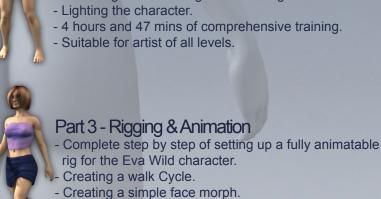
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CHAPTER 1 - FOG/MIST (DAMP) AT NIGHT-TIME

Software Used: 3ds Max + Mental Ray

INTRODUCTION

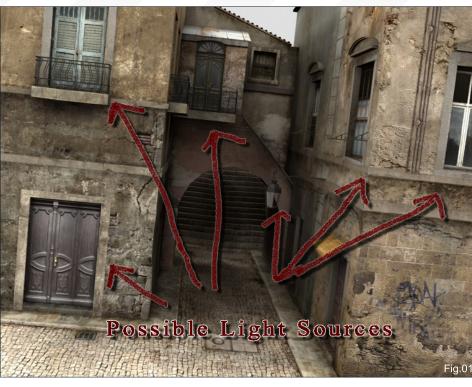
During this exterior lighting series I will be covering the techniques I used to create various time and weather conditions using 3DS Max and the Mental Ray renderer. I will be concentrating on describing my lighting methods rather than any modelling or texturing that may need to be done. I have created as much of the image as I can in Max; leaving Photoshop 'polish' to a bare minimum to achieve the final result.

For this first chapter, I will be covering setting up a foggy and damp night time atmosphere with the intention of making the viewer climb into the image and want to explore the environment. What's up those stairs? Is there anyone in the houses? What's behind that door? What's the story here? I hope you enjoy reading my tutorial and learn something you can apply to your own work.

IDENTIFYING LIGHT SOURCES

Here is the raw image (Fig.01).

I've highlighted the possible light sources that can be used. The most obvious of these is the lantern illuminating the street but I also want the



moonlight to cascade down the stairs and spill through the archway. There are also the many windows and doors that I can use to add life to the image.

The archway and stairs are central to this image; if lit correctly they can add depth and help to make the viewer want to 'climb' into the image as I described earlier. In contrast with a daylight scene, the shadows in this scene should be very soft so I used MR-Area Omni lights to light the entire scene.

The weather conditions (a foggy evening) also generate their own light so I had to take care not to wash the image out. However I used the fog to my advantage, creating further depth; light disperses through the fog creating a glowing effect, enhancing the mysterious look I wanted to achieve. At this stage, however I needed to concentrate on simply getting the lighting right. I will return to how I created the foggy look later in the tutorial

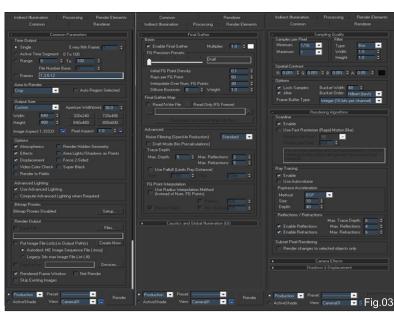
SETUP DRAFT RENDER

When lighting any image, you can't expect to achieve the final result first time. In anticipation of a lot of 'tweaking', I did many test renders. As this could potentially be very time-consuming, I setup the renderer to a draft setting so it speeded up the render times to a more workable rate. Firstly I assigned Mental Ray as the renderer and used these settings for draft renders (Fig.02).

BASE LIGHTING

By base lighting I mean natural lighting; for this scene it is the moon and its bounce light. The moonlight in this image is very important, I used it to help focus the viewer's eye into the centre of the image and help create depth. I didn't





want the moon itself to be visible as I thought it would interfere with the composition of the image, so I kept it hidden behind the buildings. I placed a MR-Area Omni light just behind the archway, about halfway up the stairs. I used the attenuation settings to give me more control over the falloff of the light so it starts and ends when I tell it to. You can achieve this control by editing the attenuation settings and adjusting the start and end values.

Here are the settings I used for the moon light (Fig.03).

Here is an image of the placed light (Fig.04).

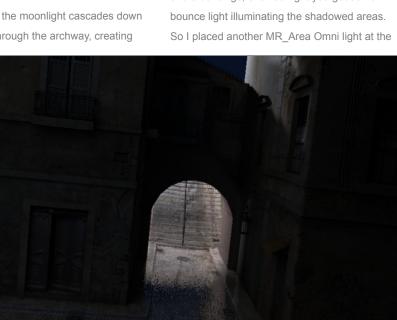
I also added moon light to the upper right of the image using a MR_Area Spotlight. I gave it a white with a light blue tint and a power of 2.0 I positioned it so it was pointing across the surface of the wall; this also gave me a soft shadow from the roofing tiles and helped to pick out the bump map giving more detail to the image.

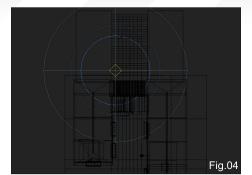
Here is the light in the scene (Fig.05).

Here is a render of the moon lighting applied (Fig.06).

As you can see the moonlight cascades down

the stairs and through the archway, creating









a very soft arched shadow over the cobbled stones. It's a little dark and flat around the front of the buildings, even at night you get some

front of the scene above the buildings. This will make the detail at the front of the building pop out

Here are the settings for the Night bounce light (Fig.07).

Here is a render of all the base lighting applied (Fig.08).

The image Is still dark and uninteresting but once I apply the environmental lighting it will create more life in the scene.

ENVIRONMENT LIGHTING

Environment lighting was my favourite aspect of this tutorial. For this scene, the most important part of the lighting comes from the street lamp as it serves as a focal point and plays a big part in creating the illusion of a foggy night. Before

Fig.07

Fig.08

I placed the light in the lamp itself, I needed to setup the lamp object so it interacted correctly with the light once added. I had to alter some of the settings in the glass geometry of the lamp so it didn't cause any unwanted light interaction. To do this I selected the glass panel object, right clicked and selected 'object properties' from the quad menu. In the window pop-up I needed to de-select 'cast shadows' and 'accept shadows'.

After making these changes, when I placed a light inside the lamp object the glass panels didn't cast shadows and block out the light being cast. The only shadows that should now be cast are from the lamp object onto the walls and floor, but these shadows should be so diffused you will not notice them. I added a MR-Area Omni light in the scene and moved it to sit inside the lamp object, roughly where a light bulb would normally sit.

Here are the settings I used to get the right result (Fig.09).

Here is an image of the placement of the light (Fig.10).

The lamplight is quite an expensive light as it has multiple effects applied to it to obtain the





foggy effect. I will revisit this in more detail later on in the tutorial. By 'expensive' I mean it took more time to calculate the render. However as this is the centrepiece of the lighting, I feel it is worth the extra time for a more realistic finish.

Here is a render of what we have now (Fig.11).

Looking at the latest render you can see that it still required more work; there was something missing. The image still looks a little flat and uninteresting: what was missing was life. In order to bring life into the image I needed to apply lighting to the windows and doors. I did this in two ways: (i) by using textures to create a self illuminating material giving the illusion of light being cast from inside and (ii) from physically carving out the geometry and forming 'fake' rooms behind the windows and doors and using a real light to illuminate the scene. This technique also gives us the option to add environmental effects such as Volume lighting; further enhancing the lifelike look I was trying to achieve. As I used both techniques in this tutorial, I will outline them both so I can demonstrate the differences.

Let's start with the doors on the left hand side. Firstly, I needed to cut out the door from the geometry and create a 'fake' room behind it. To do this, I created an open end box which surrounds the doorway, making sure all holes are welded and the geometry was solid. This reduced any lighting anomalies that may occur later on in the render. I wanted the light to come from inside the 'fake' room and spill out onto the cobbled stone road. I only wanted this room to emit a small amount of light as I didn't want it to be too overpowering and draw the viewer's eye away from the archway. For this reason, I rotated the door 10 degrees inwards to allow just enough light to escape the 'fake' room.



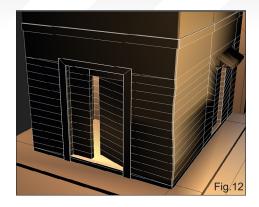
3ds max

Here is an image of the new geometry and the rotated door (Fig.12).

I then place a MR-Area Spotlight in the 'fake' room and positioned it so it was pointing out of the door opening.

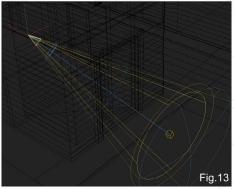
Here is an image of the positioned light (Fig.13).

I then edited the attenuation settings to give me control over when the light starts and ends. I decided to use a spotlight for this because I wanted the light to be pointing downwards towards the street. If I were to use an Omni light the light would also go upwards.



Here is an image of the settings I used for this spotlight (Fig.14).

And here is a render of what we now have (Fig.15).



At this stage, I was starting to add more life to the image but it was still missing something so I moved onto the windows. For the windows I again decided to carve out a 'fake' room behind and use a real light to illuminate this area. Using the same techniques for the doors on the left I cut out the windows and created a simple box room. This second 'fake' room also keeps the light from escaping behind the buildings.

Here is an image of the geometry after I've carved the windows out of the building geometry (Fig.16).

Note: I have only cut out the tops of the windows because I wanted to use the self illuminating material to light up the remaining window. This will give the effect of something blocking the window from the inside and help create a more realistic 'fake' room. Also if I cut out the entire window the light that escapes would over-power the image and ruin the look.

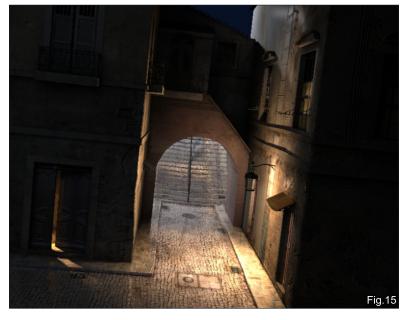
To create a self illumination map you need to create a black and white image of the texture, black being not illuminated and white being illuminated. The black and white image is placed in the self illumination slot of the material.

For the real lights I used two MR-Area Omni lights and placed them inside the 'fake' room.

Here are the settings I used (Fig.17).

I used the light from the windows to help define the building on the left and make sure it stands out from the background building.











Here is a render of the image so far (Fig.18).

Here you can see the light creating an outline of the building on the left making it stand out from the background building. Also the variation of colour difference from the self illuminated windows and the real windows gives the impression of an actual room with genuine atmosphere inside.

Once the windows were lit in the foreground, the building above the archway began to lack detail and 'got lost' in comparison with the other buildings in the scene. There is a window to the right of the door. I used the same methods as before and cut out the window and hollowed out a 'fake' room behind, duplicating the same MR-Area Omni light that was used in the other 'fake' rooms. I placed the light behind the window and kept the settings the same.

And here is a render of what we now have (Fig.19).

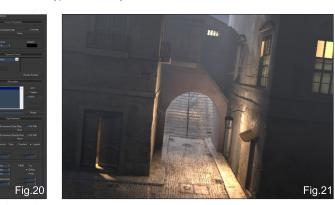
With the bulk of the lighting complete, it is now time to move on to the weather!

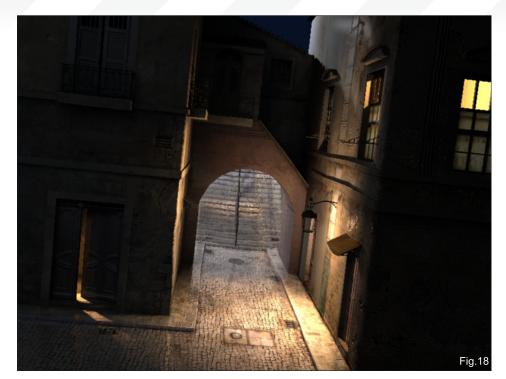
WEATHER

Fog is fairly simple to create and is quite quick to render, nothing needs to be setup in the scene in order to make this work. It's as simple as enabling it in the environment window.

Firstly I hit the number key '8' to bring up the Environment Settings tab. I then scrolled down to the Atmosphere settings and clicked 'Add'.

This brings up another window with multiple choices of the type of effects you want to







activate so I clicked 'Fog' and pressed 'OK'. This enables 'Fog' to be added to the Atmosphere section on the Environment Settings tab. From this tab, I then selected 'Fog' to enable the options to become visible.

Here are the settings I used for the Fog (Fig.20).

The fog provides a layered effect and silhouettes the buildings, helping to maintain the structures even in this dull weather condition.

Here is a render with the fog applied (Fig.21).

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STREET LAMP LENS EFFECTS.

The street lamp is the main focus so this needed to have more than just volume light applied to it. I used some Lens effects to give the impression of a light bulb glaring in the fog, casting shadows in the atmosphere. The final tweak was to make the light in the street lamp give off real characteristics of a light bulb. To get this effect I added Lens Effects to the MR-Omni light. This is done under the Atmosphere & effects tab of the light settings and adding a Lens effect from the add menu, the same way you would add volume lighting. Now that the Lens Effect has been activated on the light we can edit the settings in the Environment and effects window. Here you are presented with multiple options for effects, but for this scene I will only add 'Glow' and 'Ray'

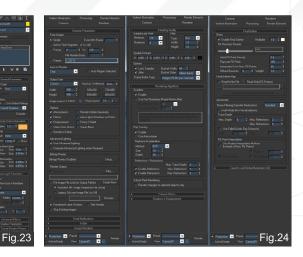
Here are the settings I used for the Glow and Ray effect (Fig.22).

TWEAKING

What I felt was lacking from the image at this



point, was a bit of bounce light to illuminate the doors and windows. This will add more detail to the image and make the image a lot more interesting. I could add bounce light in the Mental Ray renderer but I wanted a bit more control and to be a bit more artistic with the bounce light rather than leaving it to be mathematically correct. I started with the doors on the left. I added a low intensity MR-Omni Area light with a small attenuation to only affect the nearby geometry. I removed shadows cast so I didn't get any unwanted lighting issues.



Here is an image of the settings used for the bounce light (**Fig.23**).

With the tweaking completed, it was time for a medium settings render so I could see if there were any errors that needed fixing before taking the plunge and setting up a final settings render.

MEDIUM RENDER

I set the renderer to medium image precision and medium Final Gather settings. At this point, I still hadn't enabled bounce light as it would have dramatically increased the render times. With the new settings I was able to see any problems that may occur.

Here are the settings for the render (Fig.24).

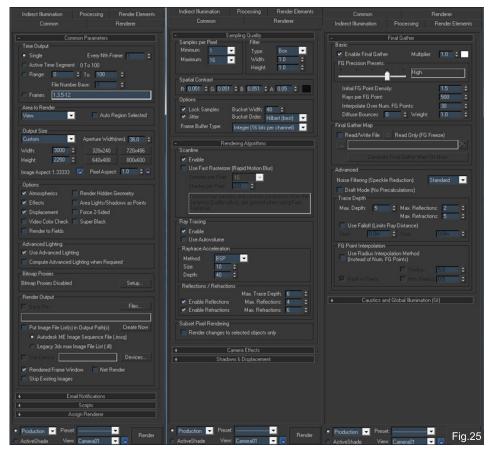
I was quite happy with the medium render and I couldn't see any major issues. Some colour correction needed to be done in Photoshop but this is normal with any image; it adds that extra bit of polish to the image.

I was now ready to go ahead and set up a high quality render.

FINAL RENDER SETUP

The render times for the final render will be quite long, so be prepared to not be able to use your computer for a day depending on how good your PC is.

Here are the settings I used to get the final render (Fig.25).





The size of the image is quite large because the image might be used for printing purposes and the larger the image the better. You should always aim to render your image for printing purposes just in case your image gets accepted into a magazine gallery or art book. You don't want to have to re-render your image at a later stage and re-do any post work that you apply.

So with everything setup it's time to hit that render button for one last time.

Here is the final Image rendered straight out of Mental Ray (Fig.26).

PHOTOSHOP

In Photoshop I used 3 adjustment layers to create the final image, namely 'Levels', 'Colour Balance' and 'Photo Filter'

Here are the settings I used for the 3 adjustment layers (Fig.27).

I also used Lens blur to provide Depth of Field. Using a Zdepth render element, I placed this image in the Alpha channel of the PSD. I then selected 'Lens Blur' from the effects menu in Photoshop which adds a little photographic realism to your image. You will notice the highlights on the steps in the background become over exposed and really twinkle with these specular highlights adding to the 'Damp' feel we wish to achieve.





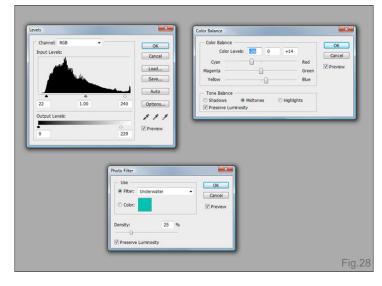


Fig 29

Here are the settings I used for Depth of Field (Fig.28).

Here is the finished product (Fig.29).

I'm quite happy with the end result and I think I achieved what I set out to do. Hopefully it tells a story and makes you want to see what's behind that door or what's on the other side of the archway. Most importantly I hope you were able to follow this tutorial and learn something from it. I actually learned a lot making it and enjoyed myself too. Thanks for reading and happy lighting!

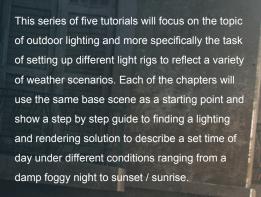
Tutorial by:

ANDREW FINCH

For more from this artist please contact them: afinchy@googlemail.com







The tutorials will explain the type of lights used and how to set up their parameters alongside the combined rendering settings in order to achieve an effective result. The manipulation of textures will also be covered in order to turn a daylight scene into night for example, as well as a look at some useful post production techniques in Photoshop in order to enhance a final still.

CHAPTER 1 | THIS ISSUE Fog/Mist at Night-Time

CHAPTER 2 | NEXT ISSUE Sunrise/Sunset

CHAPTER 3 | MARCH ISSUE 055 Moonlight

CHAPTER 4 | APRIL ISSUE 056 Midday Sun

CHAPTER 5 | MAY ISSUE 057 Overcast

DOWNLOAD RESOURCES

- Free Scene & Textures This download includes the original scene files and textures + the artist final scene setting up

LICHTING OUTDOOR CHAPTER 1: FOG/MIST (DAMP) AT NIGHT-TIME





CHAPTER 1 - FOG/MIST (DAMP) AT NIGHT-TIME

Software Used: 3ds Max + V-Ray

Before placing a single light in 3d software, it's good to spend a while, looking at the scene, and thinking, imagining a bit. The assignment is pretty clear - fog/mist (damp), at night - that's the 'prime directive'. But that is not all that matters. Composition of the image is important, regardless of the lighting scenario we have to achieve - and that too can influence light placement, strength and color. Visual style and art direction is important also - is it supposed to look real, photo real, stylized? Finding some reference can suggest a few ideas about how to achieve our task. It's also good to think about the technical aspects - is it going to be a still image, or is it for animation, should it render really fast, or maybe we have some computing power at our disposal? But nowadays, when the computers are fast, it's not always that important.

So how does all that theory work in a real life case? Let's take a look at the viewport capture (Fig.01) of our scene. First important things I noticed, were the lamp (marked red), and cobbled street surface (marked red, as well). The street would be a great tool to suggest the dampness, while the lamp would make a nice main light source, especially if it could cast a highlight on the road surface. That lamp would not be enough, so I've decided to suggest more lamps along the street, just behind the archway (that should give us a nice depth in the image), marked blue. Also, I decided to light up some windows. But which ones should I choose? The square one facing the camera (green), or one of the two on the right side (orange)? I don't want any lit windows on the walls facing the camera (marked violet) - that would break the composition that's starting to form in my head, by leading the eye towards the edges of the image.



That still does not cover all the light that should be in the scene. We need some ambient lighting, to suggest we are outdoors. I don't mean ambient settings in the 3d software, but rather the light coming from the environment: sky, moon, distant city lights, that kind of thing. In our case, it should come from above, and slightly from the front. The way I see it, artificial lights should be warm, the ambient neutral, or slightly cold/blue. The final tuning of that

balance will be handled in post-production. And we need the fog – this is crucial, without fog all the above would give us a clear night after the rain.

To render the scene, I'm using 3dsmax with Vray. Recent releases of Vray contain a very nice tool – VrayEnvironmentFog. Its main advantage over standard max fog is that it reacts to the light sources, just like real life fog.



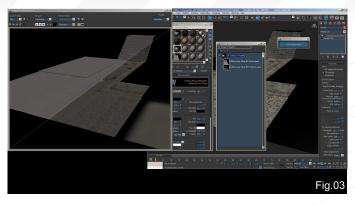
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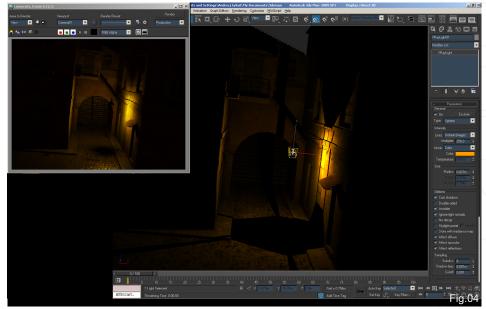
Outdoor Scene - Chapter 1: Fog/Mist (Damp) at Night-Time: ENVIRONMENT LIGHTING

That means we won't have to fake it by using volume lights and old-style fog — we will work with lights, and let Vray handle the heavy lifting of providing the atmosphere. Note of caution here. While VrayEnvironmentFog can produce very nice images, it also can take a long time to render, especially when there are a lot of light sources, not mentioning the GI. For now in the initial steps it can stay off, we will add it later on.

First thing I usually do, is set the Color Mapping to Exponential (Fig.02). While this isn't probably the most physically correct way, it has some advantages. The way it works, is by preventing over bright 'hotspots', and oversaturated color transitions. It's also very tolerant – it's really hard to whiteout the image, and the lights have a very wide range of usable multiplier/strength settings (but that range often ends up being pretty high, like 512 or so, especially with the fog on). It has downsides, too, making the colors look desaturated, and decreasing the contrast of the image. I actually like it that way, because I can easily bring back the contrast and saturation in post production, and for some scenes it just fits - but if you don't like it, there's HSV exponential mode, which better retains the color. Generally though, I mainly use the default setting with Linear Multiply for rendering some additional passes such as masks.

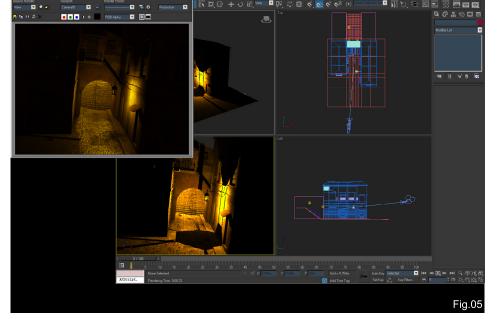






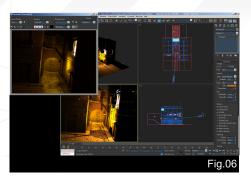
Next thing was to set up the road surface (**Fig.03**). A simple Vray material, VrayDisplacement modifier, and we are good to go.

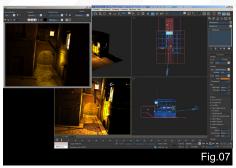
First light I've placed was the spherical Vray Light in place of the main lamp (**Fig.04**). I started with a very, very saturated orange. I actually did it with the all other lights as well – I have a tendency to use strong, colored lights that sometimes get the better of me. That usually gets fixed in later stages. That first light was duplicated along the stairway, lighting up the way into the image. It took some tweaking of their placement and strength - finally I decided to place them on the left wall, and add one on the right (**Fig.05**).



Now it's time for the windows. I started by placing a Plane (default type) Vray Light in place of the closer window on the right wall (Fig.06) — kind of by accident really, as it was supposed to be the other window. But that placement gave me a nice illumination of the left building, picking up the bump detail there, so I decided to keep it. I did try the other window, but didn't

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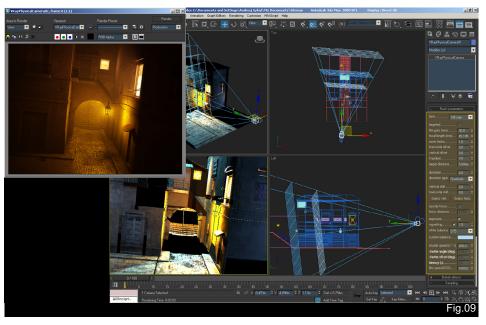






like it as it lit the arch wall way too much. The same way I lit up the little square window above the arch (Fig.07). A little trick here. As you may have noticed, I use double-sided lights. It's just for preview purposes, as it illuminates the window behind it, giving me a clue that the window is bright – without me having to do it 'the proper way'. It looks wrong, but good enough to experiment with placing window lights, and will be fixed shortly.

Somewhere at this stage, I've turned the fog on. It took me a while to find the right settings – it's good to know general scene dimensions, but it's a case of trial and error (Fig.08). It's worth noticing, that the fog absorbs quite a lot of light,



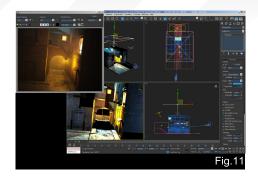


making the image darker than before – and requiring some adjustment to the lights – main light intensity was bumped up to 700.

Another solution is to adjust the exposure. To do that in Vray, we need to use VRayPhysicalCamera, which allows us to work in a photographic manner – setting f-number, ISO, and shutter speed, among others. I aligned it to the original camera using the Align tool - but it still needed some offset to match. After some attempts, I settled on the settings pictured in (Fig.09). VRayPhysicalCamera also provides the settings for vignetting, very handy even if it will be finely tuned during post production. While playing with exposure, we may continue with a more photographic approach, and change the white balance. When doing night photography, playing with WB can give nice, rich colors in seemingly plain light (Fig.10). I took these photos using Shaded / Cloudy settings, and tried to achieve some of that look in the scene, even if it was a starting to look bit too warm.

To illuminate the fog a bit, we need more light – we need the aforementioned ambient light. But we are not going to use the Ambient setting, nor will we use a Skylight solution. Sky will be handled by a big Vray Light above the whole scene, colored teal (**Fig.11**), and one smaller Vray Light, angled slightly towards the camera, placed just above the





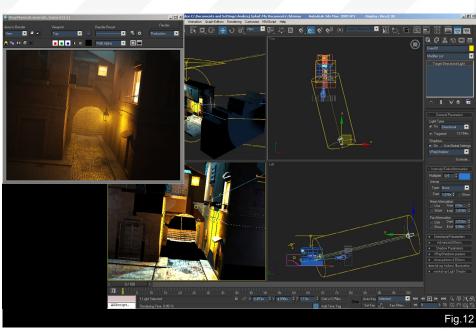
roof. Moonlight will be done using a standard Max Directional light, placed above the camera. Because I don't want the front facing walls to be lit too much, I built a simple shadow-caster object, simulating the other side of the street (Fig.12). For placing such lights, where shadow is even more important than the light, it's good to use viewport shadows display. I use it for almost all lights in the scene, but it really works well with one or two as with any more they tend to cancel each other out.

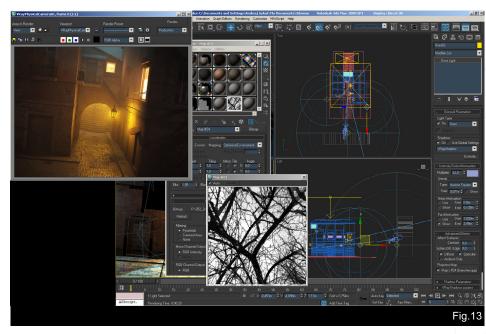
I didn't want any direct light on the front facing walls, but I wanted to suggest some world off screen. I used three Omni lights, projecting a quickly stitched image of tree branches, to simulate some streetlights hidden behind the trees (Fig.13).

At this stage with the main light sources in place, I took the low quality rendering into Photoshop, and started tweaking a bit. I quickly confirmed that most of the colors were way too saturated, producing an image that was way too warm. Quick try with Adjustment Layers provided the direction I should try (Fig.14). I also noticed that the side walls could use some specularity to accentuate the damp feeling and that there was no nice main specular on the street...

I proceeded to fix those things. Light colors got desaturated and even turned slightly blue. The light coming from the sky was now almost gray.

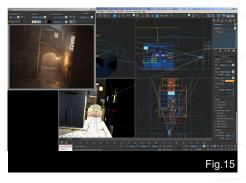
The lack of specular on the street was fixed by duplicating the main light, turning off Affect Diffuse option, and using the Place Highlight tool to position it in the right spot (**Fig.15**). Fake?







Sure, but looks good, and I couldn't achieve it with the main lamp placed where it's placed in the scene. If it was a real life movie set, it would probably be handled in a similar way by placing a light source just so.



The whole composition was starting to look unbalanced, gravitating towards the right side. I therefore added a light in the doorway down on the street level to the left in order to balance it a bit. There's also an angled box, invisible to

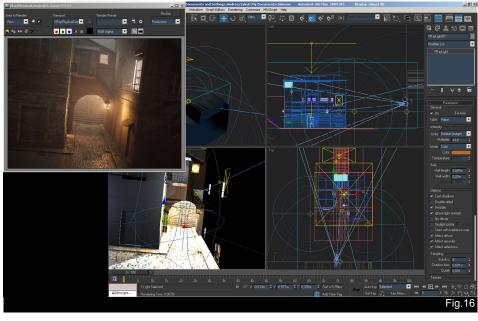
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the camera, shaping the hotspot to resemble an open door – yet another trick here (**Fig.16**).

The walls were turned into a Shellac Material, with a VrayMtl in the shellac slot (**Fig.17**). After some tweaking, I achieved a nice looking, damp wall, catching the highlight from that little square window.

The image was starting to look quite good now but a few tweaks were still required. The metal railings needed a reflective VrayMtl, the little metal roof high above the street needed to look wet, too. But the main problem was my 'preview' windows. I solved that by turning the lights to be single sided, and duplicating them. The duplicate is way weaker, as it serves only to illuminate the wall recession around the window. Now what's behind the window is another fake it's simply a self-illumination map, using a photo of a window from the outside, at night (Fig.18). It'll do for a still image, but it won't hold up for camera movement - we would need at least some simple interior then. Fortunately we are working with a still this time.

A few more slight tweaks remained – I constantly find something to tweak, even if





those things are too small to write about, they are always there. Change the hue here, by a tiny bit, tweak the material there, that kind of



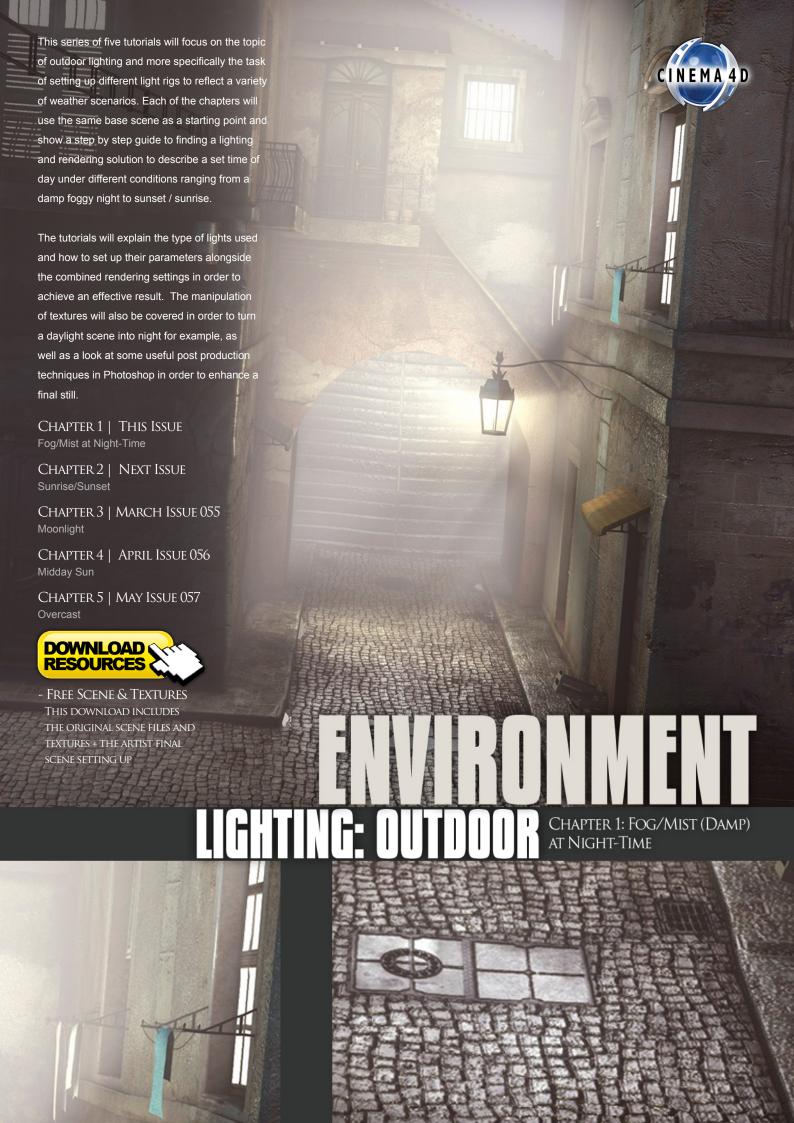
stuff. When that's done, we can try to finally render the image at higher resolution. This scene is quite time-consuming to render, due to the fog – overnight is a good idea. For test renders, I use low resolution, fixed image sampling, and lowered subdivs in the fog. Again, note of caution - Fixed sampling produces a lot of bright noise in specular areas appearing as though there should be nice, crisp detail when you do a full render. Much of this disappears and gets filtered down and smoothed, providing a much softer looking result in the end. This is something to bear in mind and so be prepared to do more than one higher quality render. The image took 22 hours to render, but I used a 3-year old machine.

Most of the post-production I had already sorted out, throwing my test renders into that first PSD test-image. I used a few radial gradients to enhance the atmosphere, some color corrections to bring back the cold, blue









CHAPTER 1 - FOG/MIST (DAMP) AT NIGHT-TIME

Software Used: Cinema 4D 11.5

ABOUT THIS TUTORIAL:

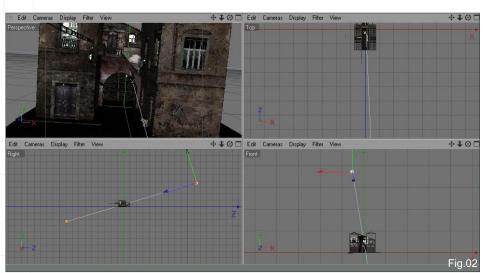
This is the first chapter in a series of 5 lighting tutorials for Cinema 4D.

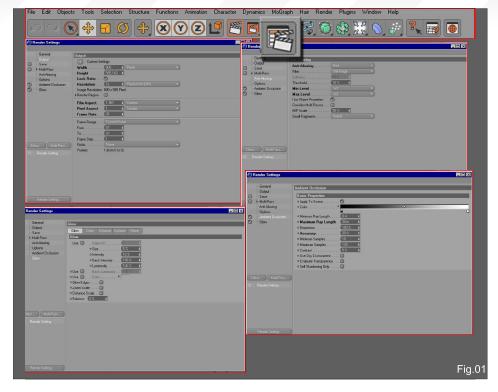
The files of this tutorial were created by using release 11.5 but I had no problem opening them in release 10. Release 9.6 or earlier does not work unfortunately.

Concerning the fact that not everybody owns the Advanced Render or a third party render, I will try to concentrate on the functions of the core-render in Cinema 4D as much as possible. It should be possible for everyone to follow this tutorial. As you might see over this series of tutorials using classical ways of illumination does not mean getting bad results. Another point is that features such as Global Illumination (or Radiosity in earlier versions of Cinema 4d) have strong differences in their workflow, parameters and functionality in depending on the version you use for your work. The attributes manager contains a lot of folders for the different settings. In the following screenshots I will only show areas where changes have been made, the rest being in default.

SO LET'S START...

We have to think about the fact that such a





lighting situation is a combination of a variety of light sources such as moonlight, lamps placed in the scene, light coming from lamps outside the view- area of the camera, bouncing light reflected by the surfaces and even the reflected light generated by the foggy elements. Therefore we never have one light source in our environment even at night.

The Render Settings

While we look at the render setting menu we can see that I used Ambient Occlusion which is part of the Advanced Render. Well, if you do not have the AR it is not an essential feature

to follow this tut- It just looks nicer. The other point is sub polygon displacement. To get a workaround, just subdivide the meshes and use the normal displacement in the material manager.

The render resolution very much depends on the performance of your system, but using a wide of 320 pixels only might be too small...

The glow I activated here could be done in post work also. If you have problems with your render speed while using anti-aliasing, you can set it to "None" of course (Fig.01)

The Moonlight

Of course we need some moonlight here in our scene. There is no need to figure out a clear position for this light source. If you take a look at the editor screenshot you can do it in a similar way as I did. The color of the moonlight has a slight "blueish" tint and the strength is not set to "full power". This is because we will have a lot of lights in the scene later on and so we should avoid having too much light in our alley which could lead to the impression it not being set at night. The contrast is lowered too. In nature mist has a damping effect on rays and so we can simulate that special kind of diffuse illumination.



Outdoor Scene - Chapter 1: Fog/Mist (Damp) at Night-Time: ENVIRONMENT LIGHTING

In most cases the shadow strength of the different lights is not set to 100 % which would be unnatural in reality. This delivers an extra bouncing light effect. After all you now have a similar result as in the render of the moonlight pass (Fig.02 – 04).

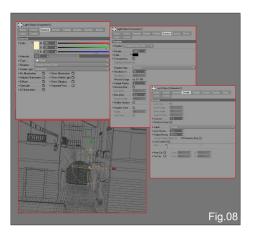
The Street Lamps

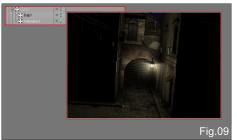
As I mentioned in the beginning, we have light sources generated by street lamps directly. They are very important for our scene and therefore we will take a closer look at their structure.

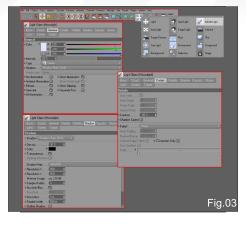
Lamp 1

This one can be considered the main element in the composition. It is the only one which lies in the focus of the scene cam directly. Its position is the same as the model of the lamp mounted onto the wall of the right building. If you take a look at the strength you will recognise that it is set to 250 % with a color range going into yellow and an area shadow which defines the surface structures around this area. We do not need a precision of 100% for the shadow parameters here. Good for the render performance.

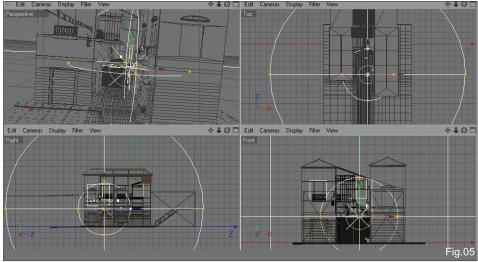
The next step is to create the illusion of a glowing light bulb. Simply copy/paste the light

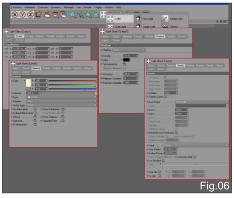






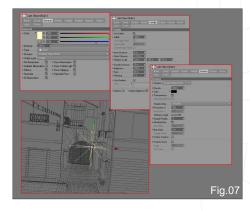






object. Set the parameters to "Visible" and activate the option "No Illumination". It does not have to illuminate the scene but instead deliver the image of a glow coming from the bulb inside the lamp.

Cinema 4D provides the option to use an environment object and activate its fog function. This is a good thing in a lot of cases, but we do not use it here. So again: copy/paste with no illumination, but this time using volumetric visibility with a soft shadow. Although it is not an

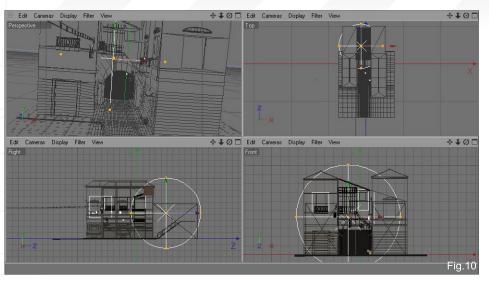


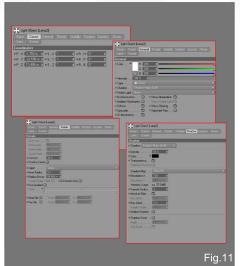
active illuminating element, the shadow option influences the rays of the volumetric character. This combination gives us more flexibility and it simulates fog at the same time. Another advantage is the better render performance in C4D (do not ask me for the reason). The strength of the light is now independent from its visibility.

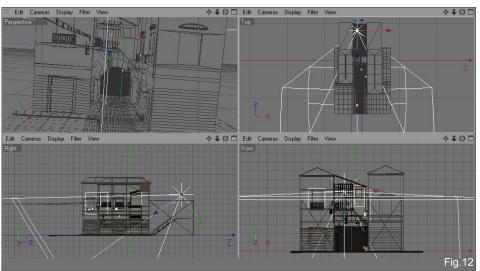
The render of the lamp1 pass gives us an impression of the result (Fig.05 – 09).

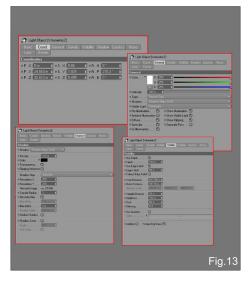
ENVIRONMENT LIGHTING: Outdoor Scene - Chapter 1: Fog/Mist (Damp) at Night-Time

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Lamp 2

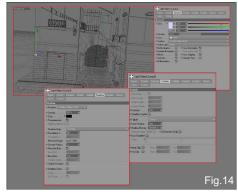
The second light is coming through the gate of the stairway. I used an Omni light here to get a soft illumination around this area. Like many other light sources in that scene, I defined a linear falloff to avoid a negative "accumulation" effect of light. This would increase the total exposure too much at the end. This kind of behaviour simulates reality much better.

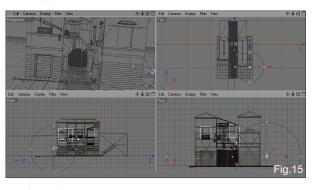
Next: copy/paste and set the light type to

"Square Spot". This gives us a better focus of the volumetric effect. We do not need a bulb simulation here, because it would not be visible from the cameras point of view (Fig.10 – 13).

Lamp 3

Lamp 3 is very simple. Just an Omni light placed in front of the left building. I used a very low custom setting for the shadows here to get a more diffuse illumination. We do not use any





The absence of the second of t

volumetric light here, because this area should stay darker. The blue color gives a nice contrast (Fig.14).

Lamp 4

To create a shadowing effect like lamp 1 I simply made a copy of the lamp model in our scene and made it a child object. Again we do not use any volumetric here (**Fig.15 – 16**).



Outdoor Scene - Chapter 1: Fog/Mist (Damp) at Night-Time: ENVIRONMENT LIGHTING



To summarise what we have so far - we have the moonlight and the lamps combined here in this render with the area of the windows leading us to the next step directly (Fig.17).

DOOR AND WINDOWS

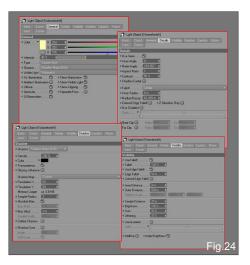
Door

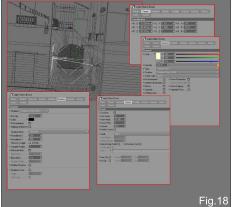
I wanted to create the impression of an open door in the left building; the parameters of which are hopefully obvious in the following screenshots

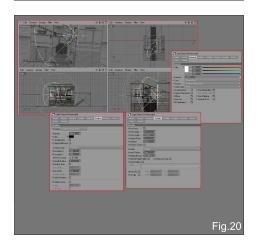
The visible light is copy/paste again (**Fig.18 – 19**).

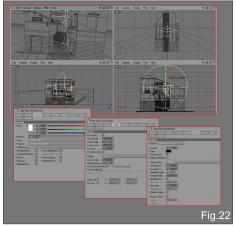
Right Window

The last render showed up some windows with a background luminance. As you take a look in the scene files, you will discover that I used planes with a luminatic material for this. In this case we get the illusion of a room behind the windows and we do not have to create a visible light like the light bulb. I've chosen a square spot again which is a good combination of render performance and control over the









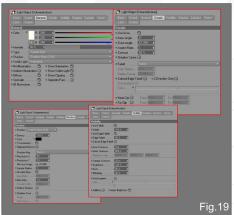
direction the light is cast. The volumetric light is produced like the others again (Fig.20 - 21).

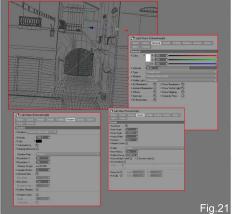
Middle Window

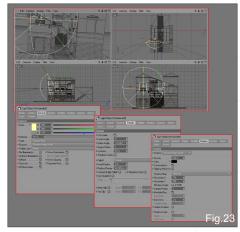
In the case of this light source I used an invisible light only. Additional volumetrics would result in too strong a glow in the area in front of the middle building (Fig.22).

Left Window

Here are the settings for the window light and its volumetrics (Fig.23 – 24).







These renders show the separate window pass and the combined render with all the other lights we have so far. You can see how the inner volumetric shadows are working when something is crossing their path. (Fig.25 – 26).

BOUNCING LIGHTS

As I said before, we need some lights to simulate the diffuse light coming from the atmosphere or as a reflection from the different surfaces. Without the usage of GI, we have to do it this way.



ENVIRONMENT LIGHTING: Outdoor Scene - Chapter 1: Fog/Mist (Damp) at Night-Time





Moon Bouncing Lights

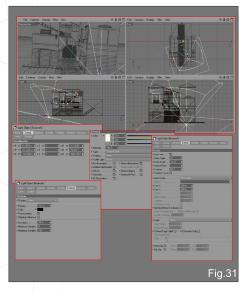
As the name suggests, these lights should simulate the indirect light coming from the sky (yes, even at night). Both bouncers are identical in their parameters apart from their position, strength and some variation in color (Fig.27).

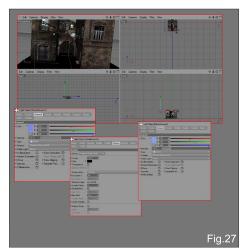
Bouncer 3

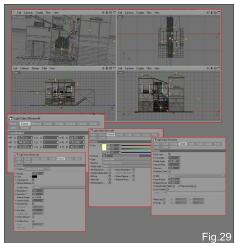
Let's get some extra definition onto the facades (Fig.28).

Bouncer 4

When you study the parameters of all light sources, you will discover that light coming from above has a cool color tone. Light coming from lamps, windows or reflections are generally warmer in hue. Bouncer 4 helps to get more light onto the small structures of the buildings (Fig.29).





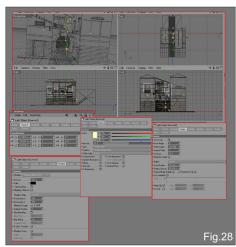


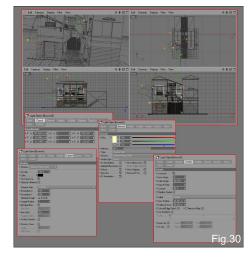
Bouncer 5

Most of them are working in a more subtle way...but they work (Fig.30).

Bouncer 6

I used an area shadow here. This allowed me to get a little more definition on the surfaces of the right building (Fig.31).



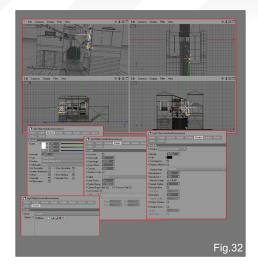


Bouncing Lights at the Right Window

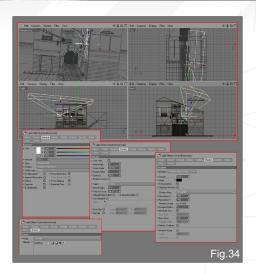
To add an extra level of realism, I positioned three square spots pointing to the side, top and the bottom of the window on the right side. This creates the illusion of a more convincing light coming from inside the building. Cinema 4D allows the possibility to scale the form of the light object along the axis. So I created a kind of



Outdoor Scene - Chapter 1: Fog/Mist (Damp) at Night-Time: ENVIRONMENT LIGHTING



10 Care One The No. 10 Car



rectangle. Because of the fact that I wanted to add this extra illumination to a very limited area only, I used the include option in the attribute menu.

While creating this setup I added the same bouncing lights to the other windows but due to the cameras point of view you'll see no difference. I therefore decided to drop them out of this set again. (Fig.32 – 34).

Let's take a look at the separate bouncer pass (Fig.35).

If we open the object manager in Cinema we should find a bundle of light objects like those in this picture (**Fig.36**).

When combining all the lights in the scene your image should look like this (Fig.37).







FINAL RENDERING

I used the settings for the final rendering as mentioned at the beginning. Instead of a width

of 800 pixels I preferred to go with 2000 pixels. The whole image rendered on my workstation in about 20 minutes. The only post work I've done here was a bit tweaking to the contrast and color

I hope you liked my little tutorial (Fig.38).

Tutorial by: FREDI VOSS

balance.

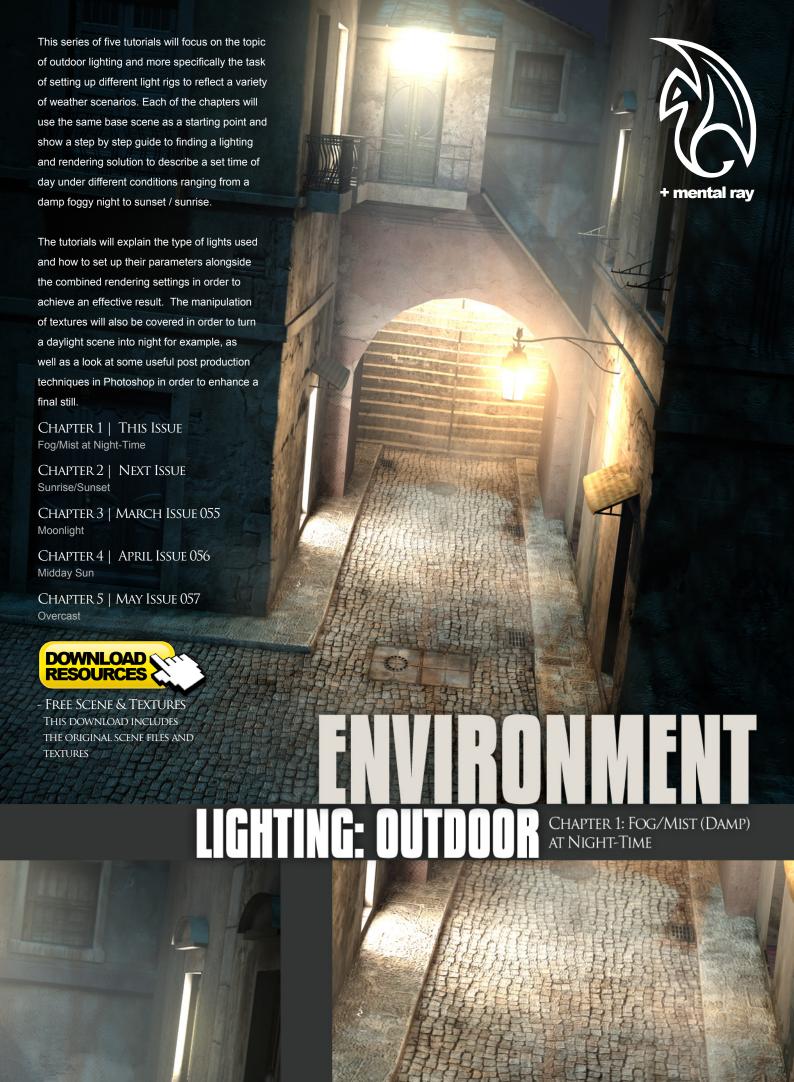
For more from this artist visit: http://fredivoss.cgsociety.org/gallery/ Or contact them: vuuxx@gmx.de



Fig.38



- FREE SCENE & TEXTURES
THIS DOWNLOAD INCLUDES
THE ORIGINAL SCENE FILES AND
TEXTURES + THE ARTIST FINAL
SCENE SETTING UP



CHAPTER 1 - FOG/MIST (DAMP) AT NIGHT-TIME

Software Used: Maya + Mental Ray

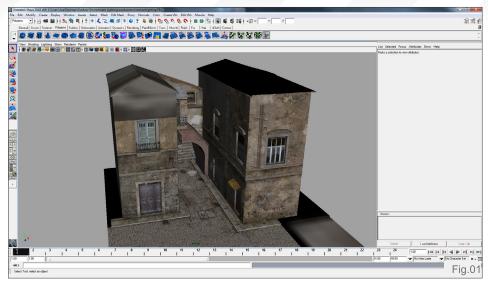
A damp, foggy, misty night. These words can't help but stir the imagination. The atmosphere they create lays a backdrop to many a story: horror, suspense, mystery, or drama. Perhaps monsters lurk around corners, silent killers stalk their targets, or shady deals go on in mysterious alleyways.

Although we will be lighting this environment with a relatively simple lighting solution and not require complete accuracy, it's still important to carefully set up the scene to ensure quick rendering and optimal settings.

Our task is to light and render the scene in this manner, creating the same emotion and depth as those first four words evoke. As with any project that demands a near photoreal depiction of a real life phenomena the key to the initial stages is research.

After collecting hundreds of images that show these conditions, we can start to break them down into key elements for reference. The main images you should look for are:

- Fog, or heavy mist that gets stronger with distance
- · Headlamps or lights that have a halo, or



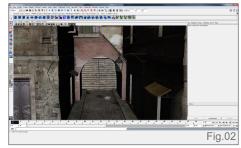
appear blurred and brighter

- Lights and light rays cast through the mist, creating volumetric effects
- · Tones becoming muted and less colorful
- Objects in the foreground appearing more silhouetted.
- · Low lying mist that silhouettes other objects

Light dispersing slowly through the scene, giving a blurred, ghostlike appearance to any objects caught in between

Now that we know a few of the elements that make up the image, we can start to work out how to achieve these effects in 3D.

We start off with the basic scene, simple textures set up on all objects, and a camera angle.

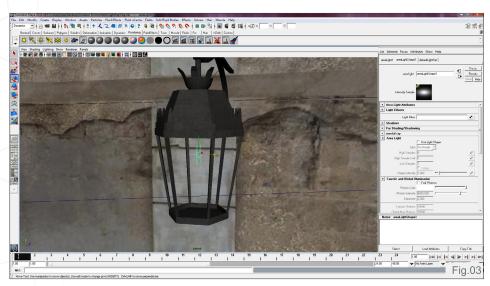


The scene is not particularly detailed, with all our detail coming from textures, bump maps, and specular maps. This is sufficient because our final image will be just that - an image, and thus we won't require any close ups of certain areas.

Lets jump right in there and place our primary light source. This is the main light contribution for the scene and will be our streetlamp. It's a unique and central feature that will cast some interesting shadows around the scene (Fig.01).

Choose an area light from the Create > Light menu and it will appear at the centre of the scene. Switch to the Transform tool and move the light in place inside the frame of the streetlamp. The direction of the area light will be wrong, so just rotate it to face downward (Fig.02).

Now it's facing downward, we need to turn it into a Mental Ray area light. In the attribute editor of the light, scroll down and find Mental Ray. Click Use Light Shape, then select Sphere from



the light. That will let us simulate a round bulb reasonably accurately (Fig.03).

EXPOSURE1

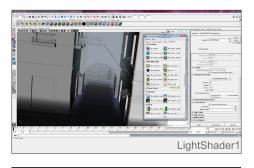
Let's now set up exposure controls on our camera. Exposure controls are a relatively new addition to Mental Ray. They let you control the brightness, gamma, contrast, vignetting, and white balance among other things. Rather than tweak lights and shaders all the time, you can create varying exposures or alterations to the images all from one page of options (See Image Exposure1).

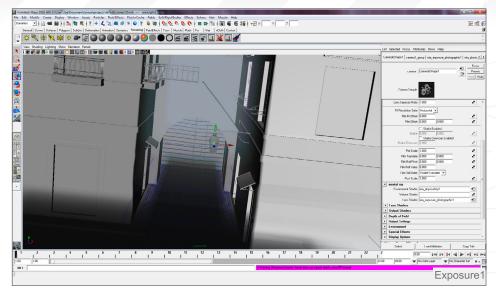
It's as easy to set up as selecting from the viewport menu - View > Camera Attribute Editor... then scroll down and find the Mental Ray dropdown. In there are 3 shaders we can apply to our camera. The one we want to play with now is the Lens shader. Click on the icon to the right and select mia_exposure_photographic1 from the list.

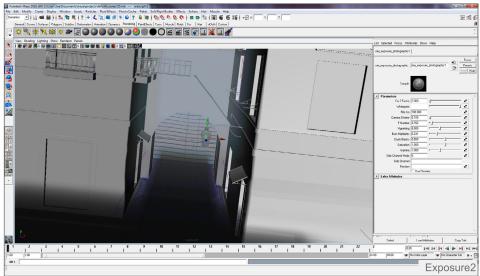
EXPOSURE2

Inside of the photographic exposure controls (See Image Exposure2) there are a wealth of options that might not all be clear immediately but will be explained as we use them during the course of the series. The ones we need to concentrate on now are these:

- Camera Shutter Essentially controls the brightness of the scene. Lower values mean brighter images.
- Vignetting Adds a darker border to mainly the corners of the image, mimicking the real camera effect. Adds realism.
- Whitepoint For now we leave it on white, but this will modify the white balance of







the scene, letting us control warmth and coolness without making changes to lights or textures.

LIGHTSHADER1

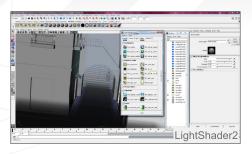
Now we have our light and exposure settings set up we should make sure that our main light is actually acting as a Mental Ray physical light and the color is using the kelvin scale, making it easier and more accurate to set the warmth or coolness of the light.

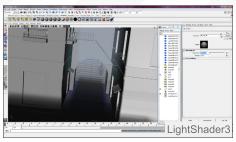
Select the light and make sure you're in the attribute editor (CTRL+A). Under the Shadows dropdown, tick the box Use Mental Ray Shadow Overrides. Under the Shadow Map Overrides section, click Take Settings from Maya, and just adjust the values to the ones in the image.

The important values are Sample, which controls the quality of the shadow, and Softness, which lets us control whether the shadow is sharp or soft. With a bit of trial and error we can adjust it to produce a shadow that looks realistic for our setting.

Under the Custom Shaders dropdown, tick Suppress All Maya Shaders, and click the icon next to Light Shader.

The Create Render Node menu will pop up and there will be a bunch of tabs along the top. On the right hand side there is the Mental Ray tab. Under this scroll down to Mental Ray Light, and select Physical Light from the list (See Image LightShader1).







LIGHTSHADER2

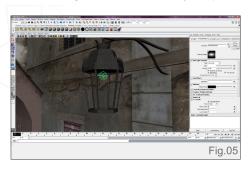
You will notice the Physical Light attributes show up on the right, and we can leave them as they are. The only thing we want to change is the color. We want to use the kelvin scale, so click the icon next to Color and select Mib_cie_d from the mental ray lights list (See Image LightShader2).

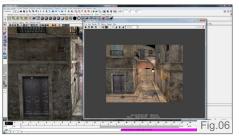
LIGHTSHADER3

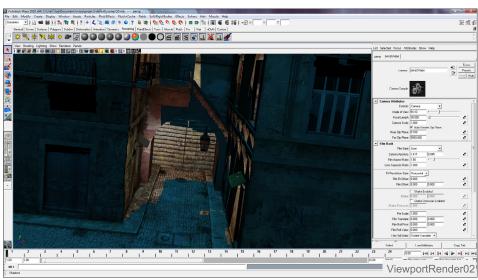
Now modify the Temperature to around 4500. Lower values mean a warmer color that would be closer to red, and higher values indicate cooler colors.

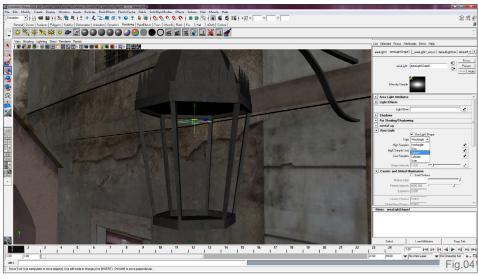
We can type in an intensity value of 50,000 for now, as our main concern is creating a good looking image and not physical realism.

Modern 3D applications have a great feature that lets you see lighting and effects in the viewport without even rendering a thing. It's these realtime effects that let us set up light sources, design shadows, and modify bump









values much quicker than ever before (See Image **LightShader3**).

ViewportRender

You can see in the following screenshot that with the bar along the top of the viewport we can turn on viewport lights (See Image ViewportRender).

ViewportRender02

To really see the viewport more accurately,

turn on viewport shadows also (See Image ViewportRender02).

Use these features to fine tune the light intensity and placement (Fig.04 – 05).

If you do render now, you will see the scene is very bright and not exclusively lit by the light we just created. This is because each of our textures has an ambient color value that is set to grey by default when importing an FBX (**Fig.06**).

Outdoor Scene - Chapter 1: Fog/Mist (Damp) at Night-Time: ENVIRONMENT LIGHTING

It's a good time to mention rendering, and setting up our render settings. There are many many settings that effect the render in Maya, but fortunately, it's not necessary to modify every one of them to produce a good looking test or production render.

First of all, we have to be sure that Maya is using Mental Ray to render the image. Open the render settings dialog (highlighted in red in the image). At the top of the dialog box that appears you can see two dropdown boxes. The second one is Render Using. Open this and select Mental Ray from the list (**Fig.07**).

On some occasions Mental Ray might not even appear here, but no fear, simply go to the Menu and select Window > Settings/Preferences/Plugin Manager and from the resulting dialog scroll

Note that Manual Control and C

down and find MayatoMR. Make sure Loaded and Auto-load is set to On (or ticked). You should now be able to select Mental Ray from Render Using list (Fig.08).

In future parts of this tutorial set I will explain the render settings in more depth, but this tutorial is designed to quickly produce a good looking image. The important things to look at in the render settings are the Image Format where we can set the file extension, and the Image Size. Set the image size to 2500x1874 if you want to render exactly as the final image. Here you can also set up the resolution, if rendering for web or print.

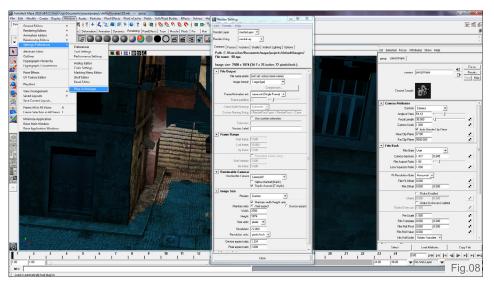
Check that the Renderable Cameras is set to Camera01 so our main scene camera is rendered and not the perspective view.

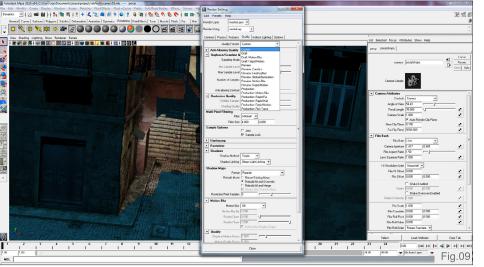
There are a couple more settings to alter still, so switch the tab to Quality and notice the Quality Presets dropdown near the top. These quality presets alter many render settings at once.

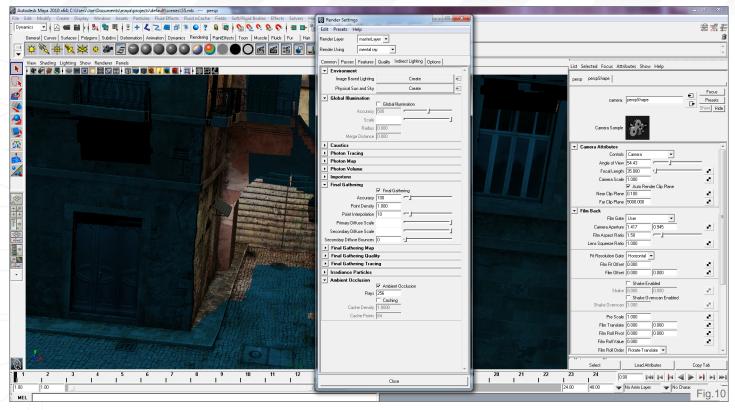
We can select Draft from the list to very quickly render our scene, mainly to check things like the balance of lighting, the colors, or the amount of fog we have.

Preview we can use to fine tune shadow shapes, shadows, light bouncing and specularity on objects.

We can switch to Production once we need to render our final image, and also to fine tune close up bump maps which demand a crisp render to see how they really look (Fig.09).

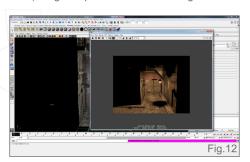


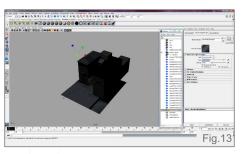


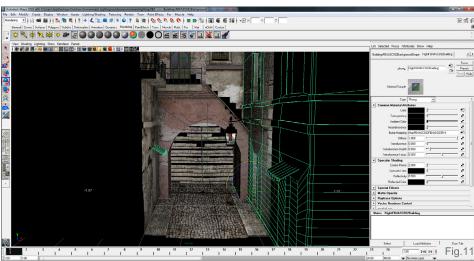


Now let's switch to the Indirect Lighting tab (Fig.10). Without altering any settings simply check on Final Gathering and Ambient Occlusion. These two features will be further explained later, but basically they increase the realism of our scene, lighting it up more evenly and producing soft shadows in corners and cracks (See Fig.06)

It's simple now to just click on each object in turn (using viewport selection or through the







outliner), and turn the ambient color value down to a pure black (Fig.11).

Now the result is more accurate and we can see our scene properly lit by our light. Notice that I've given the glass of the street lamp a yellowish bright color and increased the transparency to almost .9. In the Render Stats section I have also unclicked Receive Shadows (Fig.12).

It's a good time to now add our second lightsource. What would normally be the

sun is this time the moon. The moon can be rudementally simulated by a direct light which we will position above the scene. With the direct light we can rotate it to position the shadows exactly where we want them. The fuller the moon the stronger the shadows are, and with a bright full moon there are often shadows visible, but they are usually more diffuse and soft than that of direct sunlight.

Place the direct light in an aesthetically pleasing location and then modify the Color Attribute to be a dark and saturated blue. As we said earlier,

Outdoor Scene - Chapter 1: Fog/Mist (Damp) at Night-Time: ENVIRONMENT LIGHTING

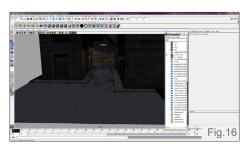
most moonlight photos are quite neutral and are not blue, however, our eyes perceive moonlight with a blue tint. To make a pleasing and well balanced image it's up to our artistic direction to combine reality with appearances in order to create our own mood. Also decrease the intensity a little, as this is not our main source of light (Fig.13).

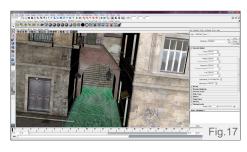
In the following two images you can see how the additional blue light creates a new mood and adds atmosphere to the scene. It also hints further at the lighting conditions (Fig.14 – 15).

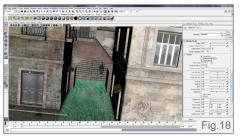
FOG

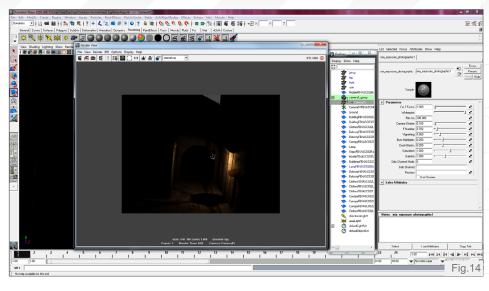
The image is coming along nicely and our main lightsources have been placed. Now is as good a time as any to place our fog. It will help us see the final balance of the color and lighting and let us more accurately position and tweak additional light sources.

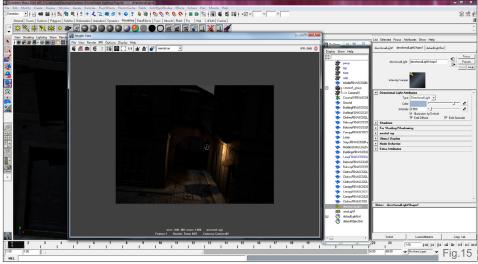
Fog is a tricky subject and so is mist. Often done in post production, in Maya we can create them quite simply using fluids.











Position the camera ready to start creating our fog and mist (Fig.16).

Under the Fluid Effects menu, click on Create 3d Container. The container will appear and you can use the Size Attributes along with manual positioning to try and "fill" the alleyway area with our container.

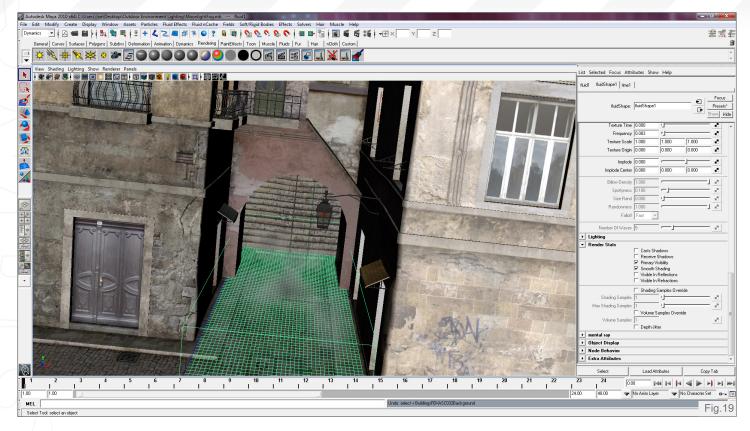
It's a good time now to increase the resolution in all axes, so change the resolution to 40,10, and 75 respectively. This should create all equal squares on the grid. If it doesn't, just adjust the resolution yourself to try and create equal squares.

Now we need to adjust the properties of this fluid container to really make it look like low lying mist. Under the Contents Method dropdown,

the Texture dropdown, and the Shading Quality dropdown, copy the settings from the below two images (Fig.17 – 18).

Important options to note are the Frequency and Shading Quality. Shading quality will have a big effect on the render time, so you should reduce this to only the minimum needed. Frequency will essentially create larger or smaller clouds. It's recommended to play around with each of these settings and see in the viewport exactly what differences they make. It's possible to make some very realistic and interesting clouds, mist, fog, and smoke using this container, and it's also very easy to animate, so make sure it's one of the tools in your arsenal.

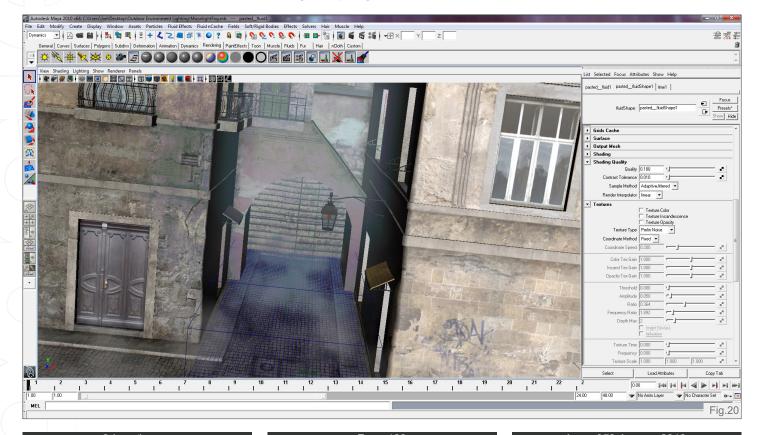
Note on the right side under Render Stats, I have unticked Receive and Cast Shadows.



There is really no need for this with mist. You can also uncheck Primary Visibility whilst tuning the rest of the scene, turning it on at the end when we want our mist to show (Fig.19).

Now duplicate this fluid by copy and pasting and then move it to cover the area under the left window and in front of the camera. That should fill up that area nicely and we can move on to creating our depth fog.

Create a new fluid container that fills up the location from the camera to the steps, and also fills the whole area up vertically. Use the same settings as the mist for Display and Contents Method. Turn off Texture Color and Texture



Outdoor Scene - Chapter 1: Fog/Mist (Damp) at Night-Time: ENVIRONMENT LIGHTING

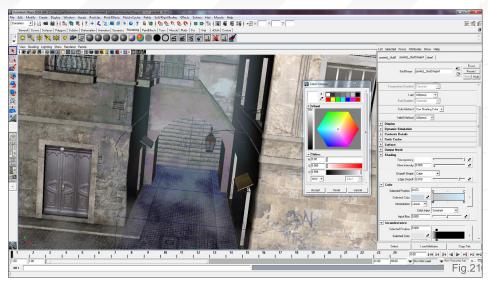
Opacity, under the Texture dropdown, as all we need is a fine fog.

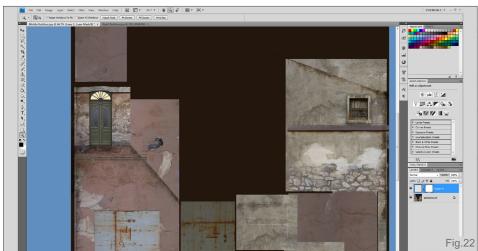
As you can see it is very easy to create depth fog in the Maya software renderer, however, that's unfortunately not the case with Mental Ray (Fig.20).

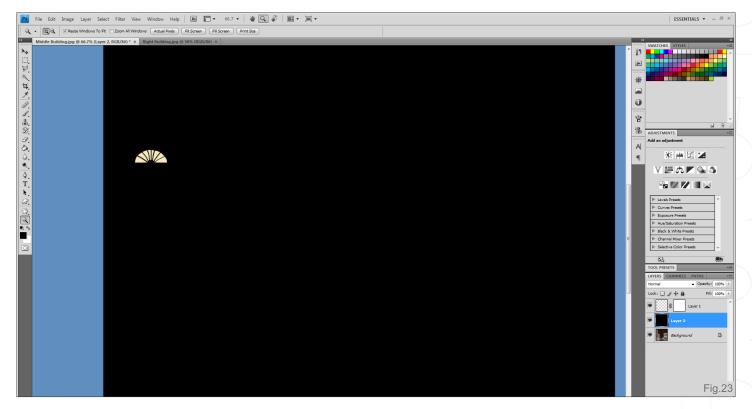
Under the Shading dropdown, we need to increase the Transparency to 0.999. It should be really fine and see-through, but noticeable in the render. The dropoff can be set to Cube and Edge dropoff set to around 0.8 to ensure it's not obvious when it touches the buildings (Fig.21).

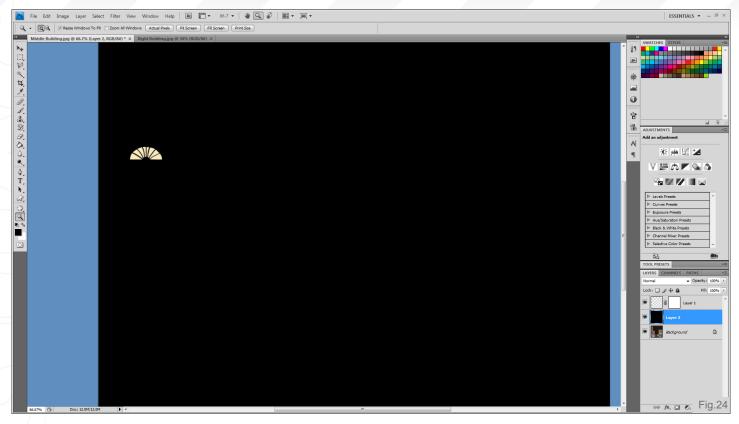
Now that the scene is starting to look respectable, we need to add some elements to make it a bit more interesting. We can start off by turning on some of the lights in the windows, namely the one above the door and the one on the right hand side, seeing as those will be primary focus points in the image.

In your image editing program, select the panes of the window on the texture and either use Hue Saturation and Lightness to turn them into a bright yellow, or you can simply paint them







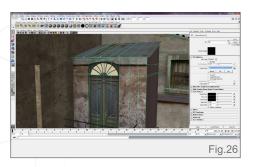


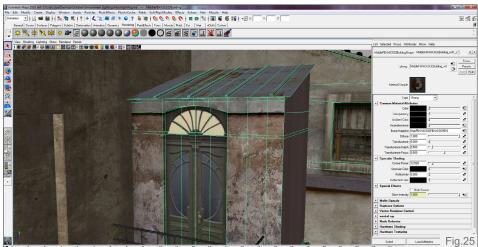
yourself. I find painting the edges of the glass darker helps sell the "light on" look (Fig.22).

It's also a good time to put this on a separate layer. Fill a lower layer with black and use the resulting image to produce a glow map, isolating the glow to those specific areas we want (Fig.23).

Back in Maya, use that glow map in the Special Effects channel of the material. Do a test render and see if it's too strong a glow, which it probably is (Fig.24).

If it is then you can modify the Alpha Gain attribute of the texture to a lower figure to find a glow that isn't quite so strong. This is one of the main points that makes Maya simple shaders so





powerful; adding glows without post production is a quick and easy process (Fig.25).

Now our image is complete and it wasn't a particularly difficult process. It can be quick and easy to light and render a scene in Maya. We can render our final images using the render settings from the quick guide earlier. Select Production from the list, and make sure Final Gathering and Ambient Occlusion are selected. I've also gone into the Quality section and changed the Anti Aliasing setting from Gauss to Mitchell, as it produces a sharper image.

I hope you found this tutorial useful in quickly lighting a moonlit, foggy scene in Maya. Future chapters will go into more detail regarding topics such as light physics, linear workflow, daylight systems, importons, and irridiance particles.

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